Take the easy way!

COLONNE HPLC BROWNLEE E CONSUMABILI PERKIN ELMER

PerkinElmer®
For the Better

ANALYTICAL TECHNOLOGY

CHROMATOGRAPHY

PerkinElmer has been a leading provider of Chromatography solutions for over 50 years. Our team of dedicated Chromatography Specialists has an expertise that boasts years of knowledge in understanding a laboratory's product requirements. This knowledge allows us to give you a focused consumables portfolio to fit your applications. From colored inlet liners that help you easily identify the correct liner for your application to gas purification systems that remove up to 99.99% of contaminants, our precision-designed, genuine tested and approved consumables will provide you with solid, reliable support, giving you all you need to succeed. But our solutions don't stop there.

At PerkinElmer, we're committed to providing you with the best selection of solutions for all your Chromatography needs, regardless of make, model or manufacturer. We have invested heavily in growing our portfolio, at your request, to bring you the best performing and productivity enhancing consumables and accessories for all your gas chromatograph systems. Our consumables can be depended upon to meet the most demanding performance and throughput needs for today's analytical, process monitoring and quality control facilities.

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VERIFY. QUANTIFY. SIMPLIFY.

The Flexar SQ 300 MS

Ideal for a variety of analyses, this single quadrupole detector brings the unsurpassed sample insight of mass spectrometry to liquid chromatography applications. The Flexar SQ 300 MS™ is an integral part of the powerful and flexible Flexar LC product line. It features a revolutionary interchangeable probe and unique multi-stage ion path for exceptional sensitivity.

Measuring has never been easier with the Flexar SQ 300 MS. It provides the simplest route to exactly the information you need — quickly. As part of the Flexar LC platform, labs can expect exceptional chromatography coupled with an innovative rugged single quadrapole mass spectrometer that offers:

- Exceptional front-end chromatographic separation capabilities
- Flexible, modular components to suit any LC/MS analytical need
- The widest selection of operating pressures to address throughput needs

The Flexar SQ 300 MS has three ion source options that allow you to specifically address your analytical needs:

- Ultraspray™ Electrospray Interface (ESI)
- Dual-probe Ultraspray2™ ESI
- Atmospheric Pressure Chemical ionization (APCI)

Powered by the PerkinElmer Chromera® software, instrument control and data acquisition are faster and easier than ever.

Flexar SQ 300 MS

Description	Part No.
Flexar SQ 300 MS	**N2910801**
Flexar SQ 300 MS with Diverter Valve	**N2910800**

Spare Probe Assemblies / Dielectric Capillary

Description	Part No.
ESI Probe and Capillary Entrance Cone Kit	**MZ300503**
Capillary Entrance Cone	**MZ105094**
ESI Probe	**MZ109197**
Dielectric Capillary	**MZ105057-60180**
Quartz Tube for APCI	**MZ109004**
Corona Needle for APCI	**MZ301193**

Calibration solutions are required for instrument installation and for routine operations.

Calibration Solutions

Description	Part No.
Calibration Mix LC/MS (+) ION Mix	**MZ301198**
Calibration Mix LC/MS (-) ION Mix	**MZ301199**

Test Kits

Description	Part No.
SQ300 Installation Performance Test Kit	**MZ300061**
SQ300 Customer Performance Test Kit	**MZ300085**
SQ300 ESI Positive and Negative Test Kit	**MZ300096**

Spare Syringes and Needles (for Syringe Pump)

Description	Part No.
Hamilton 500uL Gas Tight Syringe (No Needle)	**09220120**
Hamilton Replacement 6-pack of Needles	**09220122**

Sound Reducing Pump Box

This pump is made from noise adsorbing material, which is oil and water resistant.

- Average 12 dB sound level decrease at 1.5 meters (by comparison: decreasing sound by 10 dB results in a 50% sound reduction).
- Heat exchange is controlled by two internal silent fans guaranteeing efficient air circulation (about 200 m3/h).
- No tools needed to access the pump compartment making routine maintenance and oil change easy to be performed.

Description	Part No.
Sound Reducing Pump Box	**MZ301123**

LCMS Filtration System

High Capacity Hydrocarbon Trap

- Contains 750 cc of preconditioned activated charcoal.
- Stainless steel body. ¼" brass compression fittngs with ferrules for installation.
- Maximum pressure 200 psi.
- Recommended flow rate up to 2 L per minute.
- Will remove hydrocarbon impurities (50 ppm or less) from inert gases, nitrogen and hydrogen at room temperature to low ppb range.
- Capacity of 67 g of hydrocarbons C5 and heavier.
- 10 µ stainless steel porous frits protect gas stream from particulates.
- Individually helium leak tested. Shipped filled wth helium.

Description	Part No.
LCMS Filtration System	**N9301208**

Custom Benches

Description	Part No.
120V Bench with Ventilated, Sound Dampened Pump Enclosure	**N2911197**
120V Bench with Monitor/Keyboard Arm, Side Shelf and Ventilated, Sound Dampened Pump Enclosure	**N2911196**
230V Bench with Ventilated, Sound Dampened Pump Enclosure	**N2911199**
230V Bench with Monitor/Keyboard Arm, Side Shelf and Ventilated, Sound Dampened Pump Enclosure	**N2911198**
Roughing Pump Box with Acoustically Insulated Pump Enclosure	**N8141230**
Uninterrupted Power Supply (UPS)	**N0777511**

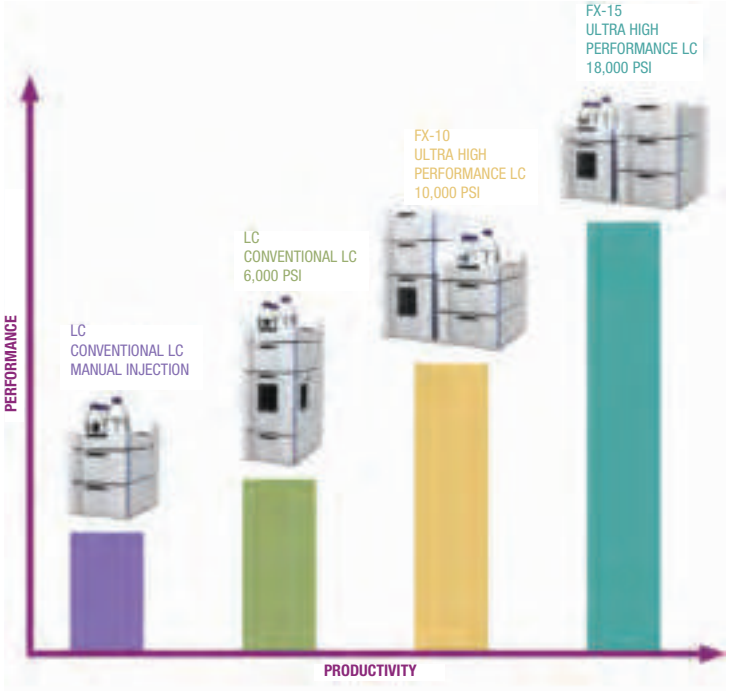
Certified LC Clean Easy-to-Order Convenience Kits

Description	Pkg	Part No.
Certified LC Clean Non-slit Cap/Vial Convenience Kit		**N9300707**
9 mm 2 mL Screw Top Clear Vial	100	
9 mm Blue Screw Top Cap with Clear Non-slit PTFE/Silicone (LC Clean)	100	
Certified LC Clean Pre-slit Cap/Clear Vial Convenience Kit		**N9300708**
9 mm 2 mL Screw Top Clear Vial with 9 mm Gray Screw Top Cap	100	
9 mm Gray Screw Top Cap with Clear Pre-slit PTFE/Silicone (LC Clean)	100	
Certified LC Clean Non-slit CapAmber Vial Convenience Kit		**N9300719**
9 mm 2 mL Screw Top Amber Vial	100	
9 mm Blue Screw Top Cap with Clear Non-slit PTFE/Silicone (LC Clean)	100	
Certified LC Clean Pre-Slit Cap/Amber Vial Convenience Kit		**N9300720**
9 mm 2 mL Screw Top Amber Vial	100	
9 mm Gray Screw Top Cap with Clear Pre-slit PTFE/Silicone (LC Clean)	100	

LCMS Caps

Description	Pkg	Part No.
9 mm Screw Cap Blue PTFE (Natural)/ Silicone (White) Ultra-low Bleed, Non-slit	100	**N9306362**
9 mm Screw Cap Blue PTFE (Natural)/ Silicone (White) Ultra-low Bleed, Non-slit	1,000	**N9306363**
9 mm Screw Cap Blue PTFE (Natural)/ Silicone (white) Ultra-low Bleed, Slit	100	**N9306364**
9 mm Screw Cap Blue PTFE (Natural)/ Silicone (white) Ultra-low Bleed, Slit	1,000	**N9306365**

POWER AND FLEXIBILITY IN UHPLC



NEW FLEXAR™ UHPLC SYSTEM FROM PERKINELMER

With Flexar UHPLC, you'll be able to transfer your existing methods to achieve faster, more predictable results while reducing your solvent consumption by up to 90%. The FX-15's patented, dual reciprocating, 18,000 psi pump offers the widest operating range with exceptional compositional accuracy and retention time repeatability. The value and performance of the FX-10 microbinary pump offers minimal disruption in your method development phase and analytical approach so you can easily port your existing methods. And with the powerfully easy new Chromera® software, instrument control is taken to a whole new level. Performance, flexibility and predictability — Flexar.

Benefits of Flexar UHPLC

- Improved separation efficiency
- Up to 90% reduction in solvent consumption — saving you money
- Up to 10x productivity gains — helping you do more in less time

Flexar UHPLC Systems

Description	Part No.
Flexar FX-10 UHPLC Platform	**NFLR0210**
Flexar FX-10 UHPLC Pump	**N2910640**
Flexar FX-10 UHP Pump Master	**N2910641**
"Flexar Bottle Manager, 3-channel Vacuum Degassing" Tubing Kit	**N2600581**

Flexar UHPLC Systems

Description	Part No.
Flexar FX-15 UHPLC Platform	**NFLR0215**
Flexar FX-15 UHPLC Pump	**N2910531**
"Flexar Bottle Manager, 3-channel Vacuum Degassing" Tubing Kit	**N2600581**

High Pressure Analytical Static Mixers

Static Mixers are important in facilitating complete mobile phase blending, resulting in improved retention performance. These mixers should be used as part of FX10, or FX15 LC systems, where high pressure blending is required. Mixers incorporate a highly efficient cross-flow shearing mechanism which produces vortex sheer mixing over a wide range of volumes. They are now offered in 18,000 psi pressure max flavor.

A good first choice selection is a volume of about half the flow rate volume. For example, when pumping at a 0.5 mL/min flow rate, a 350 µL mixer provides good mixing with very good baseline stability.

Description	Part No.
50 µL In-Line High Pressure Mixer Assembly, SS	**N2911200**
150 µL In-Line High Pressure Mixer Assembly, SS	**N2911201**
250 µL In-Line High Pressure Mixer Assembly, SS	**N2911202**
350 µL In-Line High Pressure Mixer Assembly, SS	**N2911205**
500 µL In-Line High Pressure Mixer Assembly, SS	**N2911203**
150 µL High Pressure Binary High Pressure Mixing-T, SS	**N2911206**
10 µL Binary Mixing-T, SS	**N2911170**
Binary High Pressure T-Mixer, SS, 50 µL	**N2911212**
Binary High Pressure T-Mixer, SS, 350 µL	**N2911210**
Binary High Pressure T-Mixer, SS, 500 µL	**N2911211**
T-connector, SS	**N2911127**

Syringes and Kits

PerkinElmer syringe kits for high pressure applications are manufactured for precise liquid delivery. All of these glass syringes come with precision stainless steel plungers. They are used for sampling and flushing and are available in a large variety of sizes.

Syringes

Description	Part No.
Sample Needle w/Fittings	**N2936009**
Air Guide Needle (62 mm)	**N2936000**
Bio Compatible Sample Needle w/Tubing Connector	**N2936010**
Needle (80 mm)	**N2936342**

Syringe Kits

Dimension	Buffer Tubing	Part No.
100 µL	200 µL	**N2936051**
250 µL	500 µL	**N2936052**
500 µL	1,000 µL	**N2936053**
1,000 µL	2,000 µL	**N2936054**
2,500 µL	2,000 µL	**N2936055**

FX-15 UHPLC Pump Accessories

Description	Part No.
Replacement 0.5 µm Filter Frits for FX-15 (4-pack)	**N2911224**
High Pressure FX-15 Piston Seal Kit (Need 4 per FX-15)	**N2911221**
Piston Wash Bottle Kit	**N2601616**
2,500 µL Sample Syringe Starting Kit	**N2930313**

FX-10 and FX-15 UHPLC System Accessories

Description	Color	Size	Part No.
ID PEEK Tubing			
0.004"	Black	50 cm	**N2916200**
0.005"	Red	50 cm	**N2916056**
0.004"	Black	76 cm	**N2916260**
0.005"	Red	66 cm	**N2916262**
Connector Tubing, Stainless Steel			
Flexar ISO/Binary/Quaternary Pump to Autosampler			**N2916210**
Dual Mixer Connection (≤ 250 µL)			**N2916216**
Dual Mixer Connection (³350 µL)			**N2916217**
FX-10 Pump A (Upper) to T-mixer			**N2916213**
FX-10 Pump B (Lower) to T-mixer			**N2916214**
FX-10 Purge Valve to Filter/Scavenger			**N2916212**
FX-10 Injector to Column			**N2916215**
FX-10 Pump A (Upper) to Dual Mixers			**N2916218**
FX-10 Pump B (Lower) to Dual Mixers			**N2916219**
FX-15 Pump to In-line Mixer			**N2916222**
FX-15 Pump to Dual Mixers			**N2916224**
FX-15 Injector to Column, Standard			**N2916223**
FX-15 Injector to Column, 33 cm			**N2916201**
3 cm Scavenger Cartridge Holder			**02580178**
Spheri5 Scavenger Columns (5-pack)			**02580202**
30 mL Priming Syringe			**09904849**
FX-15 C18 Scavenger Column Kit			**N2910765**
FX-15 C18 Scavenger Columns (2/pkg)			**02580223**

Microsyringes (For Manual Injection)

Syringes are used for accurate and precise liquid delivery. Each syringe is hand-fitted to assure maximum accuracy. Our syringes are composed of glass barrels and precision stainless steel needles. The needle features a blunt tip, required for use with a Rheodyne injector.

Description	Part No.
10 µL Syringe	**09904937**
25 µL Syringe	**09904823**
50 µL Syringe	**09904941**
100 µL Syringe	**09904822**
Rheodyne 22-gauge Blunt Needle with Luer Hub	**09904943**

INJECT WITH GREATER PRECISION

Flexar Autosamplers

Best-in-class cycle time. Wide injection volume range. Excellent injection reproducibility. Precisely what you need to increase your sample throughput and efficiency.

Features and Benefits

- Injects sample volumes as little as 1 µL at pressures up to 18,000 psi with the FX UHPLC Autosampler
- Loads sample in only 8 seconds (in partial fill mode)
- Three injection modes: full loop, partial fill and µL-pickup with no sample waste
- Peltier cooling/heating mode option for operation at 4 °C to 40 °C. Will reach 4 °C ± 2 °C, achievable even at ambient temperatures up to 25 °C.

All Flexar autosamplers can be upgraded in the field for Peltier cooling and heating. All Flexar autosamplers include:

- 100-sample tray
- 100 2 mL vials
- 100 2 mL screw top cap with cross slit vial septum
- Tubing to connect to waste reservoir
- I/O cable (Pump Start/Ready-In)
- Service Manager SW CD
- User's Manual
- Nuts and ferrules
- All fuses for 120–240 V
- All cables required for connection to a TotalChrom or Chromera Operating Environment

Flexar or Series 225/275 Autosampler Trays and Accessories

Description	Part No.
25-Position 6 mL Vial Sample Tray	**N2936045**
80-Position 2 mL Vial plus (5) 6 mL Vial Tray (for derivatization)	**N2936046**
80-Position 2 mL Vial Tray with Dilution Tray	**N2930676**
96-well Microtiter Adapter	**N9302562**
96-well 'Deep-well' Microtiter Adapter	**N9302560**
96-well 7 mm Pre-slit Silicone Plate Mat/Seal	**N9302555**
96-well 'Deep' Microtiter Plate Adaptor (Supports Dual Microtiter Plates)	**N2936048**
96-well 'Shallow' Microtiter Plate Adaptor (Supports Dual Microtiter Plates)	**N2936049**
384-well Microtiter Adapter	**N2936050**
100-Position 2 mL Vial Sample Tray	**N2936042**
(200) 0.2 mL Microvial plus (5) 2 mL Vial Tray	**N2936043**
250 µL Syringe Tip Replacements (10/pkg)	**N2936003**
Flexar/225 Biocompatible Upgrade Kit (w/valve)	**N2930675**
1/16" OD x 0.038" ID Teflon Tubing (AS Transfer Line)	**02506495**

Flexar Autosamplers and Upgrade Kits

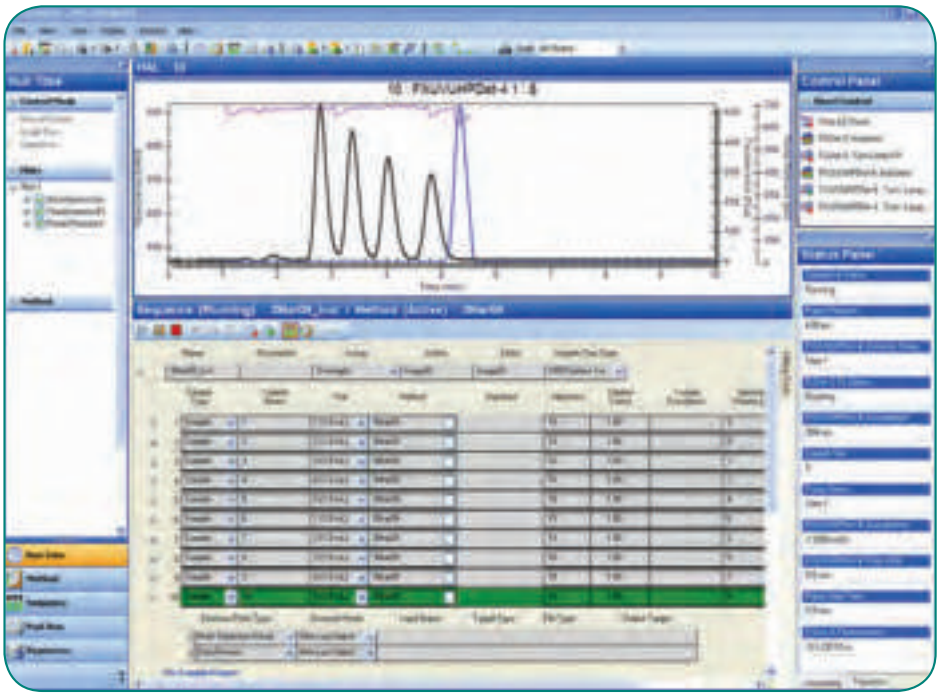
Description	Part No.
Flexar LC Autosampler	
High throughput autosampler with exceptionally low carryover. Operates up to 6,100 psi (420 bar). Provides flexible injection modes: full-loop, partial-fill and µL-Pickup (no sample waste). Peltier cooling and heating options available as field upgrades. Comes standard with 100 µL loop and 250 µL sample flush syringe.	**N2930660**
Flexar Peltier LC Autosampler	
High throughput autosampler with exceptionally low carryover. Operates up to 6,100 psi (420 bar). Provides flexible injection modes: full-loop, partial-fill and µL-Pickup (no sample waste). Built-in Peltier cooling comes standard. Peltier heating option available as field upgrade. Comes standard with 100 µL loop and 250 µL sample flush syringe.	**N2930661**
Flexar FX UHPLC Autosampler	
High throughput UHPLC autosampler with exceptionally low carryover. Operates up to 18,000 psi (1,241 bar). Provides flexible injection modes: full-loop, partial-fill and µL-Pickup (no sample waste). Built-in Peltier cooling comes standard. Peltier heating option available as field upgrade. Comes standard with 10 µL loop and 250 µL sample flush syringe.	**N2930664**
Field Upgrade Peltier Kits	
Flexar and Series 225 Upgrade Kit (from standard to Peltier Cooling option)	**N2930672**
Flexar and Series 225 Upgrade Kit (from standard to Peltier Cooling and Heating option)	**N2930673**
Flexar and Series 225 Upgrade Kit (from Peltier Cooling to Peltier Cooling and Heating option)	**N2930669**

CHROMERA® CHROMATOGRAPHY DATA SYSTEM

THE POWERFULLY EASY CDS

One click and you'll see: CDS doesn't get any easier than Chromera. Combining intuitive ease of use with powerful functionality and configurability, Chromera delivers the most streamlined way to get from the analysis you need to the information your enterprise demands. It's powerfully easy.

Information-rich Desktop offers instrument control at-a-glance



Features and Benefits

Powerful

- Instrument Control: NEW patented "Device Descriptors" control instruments. No channels limitation, trackable instrument status
- Designed for UHPLC: interactive graphical methods optimization environment with immediate feedback; ability to overlay pressure profile run after run. Extend runtime of chromatogram in real time
- Graphics: Multichannel graphics for multiple signal channel monitoring (including system status channels to get 'the pulse of the system' real-time)
- Feedback: Instrument-at-a-glance status panel provides real-time feedback of complete LC system
- Batch Sequencing: all the functions for setting up and reviewing a sequence and results are within a single environment

Easy

- Shallow footprint GUI: Most functions only one or two clicks away, using familiar Microsoft™ Outlook user interface
- Simple and obvious method editor: a single-point access to all instrument parameters, regardless of how complex the instrument configuration; Convenient tools for point-and-click method optimization
- Intuitive Sequence Wizard: Create complex sample tables easily; Convenient auto-fill and other editing functions; Decision Points for real-time and post-processing data evaluation
- Peak Integration Wizard: Makes integration process easy and straight forward
- Report Wizard: allows creating numerous styles of reports and printouts using the same tool

LC VIALS, CAPS AND SEPTA KITS

PerkinElmer Supplies – Tested and Approved

We have expanded our product selection to include additional vial types, new version caps and mating septa in a kit format for easier customer ordering. The following pages contain both current and new product information. Tested to meet your application requirements and guaranteed for fit and compatibility.

LC Vials, Caps and Septa Kits

PerkinElmer offers a variety of vials, caps and septa to fulfill your application needs. Our screw thread vial caps use the revolutionary Inter-Seal®. Using a process that bonds silicone/PTFE and other elastomeric compounds directly into thermoplastic closures eliminates liner fallout, while still providing the excellent resealability and multiple injection capability. No adhesives are used in this process, bonding the cap and septa at the molecular level of plastic and rubber. These septa have a very broad chemical resistance and can be used in many markets including: environmental, diagnostic packaging, pharmaceutical packaging, cosmetic and food packaging.

2.0 mL Glass Vials*

Description	Pkg.	Part No.
2 mL 11 mm Clear Glass Crimp Vials	100	**N9301385**
2 mL 11 mm Clear Crimp Wide Opening Vials with Write-On Patch and Fill Lines	100	**N9306223**
2 mL 11 mm Amber Glass Crimp Vials	100	**N9302680**
2 mL 11 mm Amber Crimp Wide Opening Vials with Write-On Patch and Fill Lines	100	**N9302679**
2 mL 11 mm Clear Snap Top Vial	100	**N9303418**
2 mL 11 mm Clear Snap Wide Opening Vials with Write-On Patch and Fill Lines	100	**N9306207**
2 mL 11 mm Amber Snap Wide Opening Vials with Write-On Patch and Fill Lines	100	**N9306208**
2 mL 8 mm Screw Top Clear Glass Vials	100	**N9302945**
2 mL 9 mm Clear Screw Top Vials	100	**N9306201**
2 mL 9 mm Screw Top Amber Vials	100	**N9306220**
2 mL 9 mm Clear Screw Top Vial with Write-On Patch and Fill Lines	100	**N9307801**
2 mL 9 mm Screw Top Amber Vials with Write-On Patch and Fill Lines	100	**N9307802**
2 mL 10 mm Clear Glass Screw Top Vials with Write-On Label and Fill Lines	100	**N9306053**
2 mL 10 mm Amber Glass Screw Top Vials with Write-On Label and Fill Lines	100	**N9306057**

2.0 mL Caps and Septa*

Description	Pkg.	Part No.
11 mm Snap Cap Polyethylene Cross-cut Slit (no Septum)	1,000	**04978532**
11 mm Snap Cap Polyethylene Single Slit (no Septum)	1,000	**N9307023**
8 mm Black Screw Caps (without septa)	100	**N9303441**
8 mm SEPTA-PTFE Red Rubber No CAP (for Cap N9303441)	100	**N9303442**
8 mm Screw Cap PTFE/Silicone Septa	100	**N9303449**
9 mm PTFE/Silicone Screw Cap Blue	100	**N9306202**
10 mm PTFE/Red Rubber Screw Cap Black	100	**N9306206**
10 mm PTFE/Silicone Single Slit Screw Cap Black	100	**N9306052**
10 mm PTFE/Silicone No Slit Screw Cap Black	100	**N9306205**
11 mm Crimp Green Aluminum Cap w/Teflon® Rubber Septa	100	**N9302684**
11 mm Crimp Red Aluminum Cap w/Teflon® Rubber Septa	100	**N9302685**
11 mm Crimp Blue Aluminum Cap w/Teflon® Rubber Septa	100	**N9302686**
11 mm Crimp Silver Aluminum Cap w/Teflon® Rubber Septa	100	**N9306015**
11 mm Crimp Silver Red Rubber	100	**N9306230**
11 mm Crimp Silver PTFE/Silicone	100	**N9306228**
11 mm Crimp Silver PTFE/Silicone/PTFE	100	**N9306229**

* Also see Convenience Kits for additional vials and caps, sold separately.

0.2 mL Micro Vials, Caps and Septa

Description	Pkg.	Part No.
Caps/Septa		
8 mm Silver Aluminum Crimp Cap PTFE/Rubber	1,000	**03300806**
PTFE/Pre-Slit White Silicone Polyethylene Press-On Cross-Slit Cap for 8 mm Vials	1,000	**N9302141**
Crimp Top Vials		
Glass Microvials, Tapered, 0.2 mL, 8 mm o.d. Top**	500	**N9302136**
Autosampler Vial Sleeve		
12 x 32 Glass Vial Support Sleeve for 2 mL 8 mm Micro Vials (N9302136)	25	**N9307027**
Micro Vial Kit		
Polyethylene Includes 300 µL Tapered Vial, Blue Polypropylene Cap with Bonded Silicone/PTFE Septa	500	**N9306080**

** To be used with Glass Vial Support Sleeve (N9307027).

UHPLC – General Starter Kit

Description	Part No.
UHPLC – General Starter Kit	**N2930801**

Contents	Qty/Pack	Part No.
Open-End Wrench	2	**09907233**
Adjustable Wrench	1	**N9301326**
Reversible Screw Driver	1	**N9301480**
Parker-Hannifin ZDV SS Union	1	**09903289**
Parker-Hannifin Medium-Stem SS Nuts	10	**09903980**
1/16" Parker-Hannifin SS Ferrules	10	**00873032**
1/16" Valco SS Ferrules	6	**09903891**
Finger-Tight Fittings, PEEK, 5.5K psi Max. (5/pk)	1	**N9307822**
Optimize Technologies EZP (Hand-Tight Fitting to 13K psi, Wrench-tight to 20K psi)	1	**N9306301**
1/16" Tefzel Nuts	2	**09920381**
1/16" Tefzel Reverse Ferrules	2	**09920382**
1/8" Tefzel Nuts	4	**N2601189**
1/8" Tefzel Reverse Ferrules	4	**09903771**
PEEK Tubing Cutter (Includes 5 Extra Blades)	1	**N9307820**
50 cm x 0.005" ID 1/16" SS Tubing	3	**02507060**
5' x 0.004" ID 1/16" PEEK Tubing, Black	1	**N2916261**
5' x 0.005" ID 1/16" PEEK Tubing, Red	1	**N2916262**
30 mL Priming Syringe	1	**09904849**
2 mL Clear Write-On Vials w/10 mm Pre-Slit PTFE/Silicone Caps; 100/pk	1	**N9300695**
Cable/Tubing Organizer Clip	3	**NX598006**

HPLC – General Starter Kit

Description	Part No.
HPLC – General Starter Kit	**N2930802**

Contents	Qty/Pack	Part No.
Open-End Wrench	2	**09907233**
Adjustable Wrench	1	**N9301326**
Reversible Screw Driver	1	**N9301480**
Parker-Hannifin ZDV SS Union	1	**09903289**
Parker-Hannifin Medium-Stem SS Nut	10	**09903980**
1/16" Parker-Hannifin SS Ferrule	10	**00873032**
1/16" Valco SS Ferrules	6	**09903891**
Rheodyne SS Nut, Short Stem	2	**09904956**
Rheodyne SS Nut, Long Stem	2	**09904974**
1/16" Rheodyne SS Ferrule	4	**09904947**
1/16" Tefzel Nuts	2	**09920381**
1/16" Tefzel Reverse Ferrules	2	**09920382**
1/8" Tefzel Nuts	4	**N2601189**
1/8" Tefzel Reverse Ferrules	4	**09903771**
Finger-Tight Fittings, PEEK, 4K psi Max.	6	**09920513**
PEEK Tubing Cutter (Includes 5 Extra Blades)	1	**N9307820**
50 cm x 0.005" ID 1/16" SS Tubing	1	**02507060**
50 cm x 0.007" ID 1/16" SS Tubing	2	**00891480**
5' x 0.007" ID 1/16" PEEK Tubing, Yellowish-Tan	1	**N9302650**
5' x 0.005" ID 1/16" PEEK Tubing, Red	1	**N2916262**
30 mL Priming Syringe	1	**09904849**
2 mL clear write-on vials w/10 mm Pre-Slit PTFE/Silicone Caps; 100/pk	1	**N9300695**
Cable/Tubing Organizer Clip	3	**NX598006**

Autosampler Vial Glass Inserts

Description	Pkg.	Part No.
Vial Glass Inserts:		
6 mm x 29 mm Clear Glass Insert, Rimless Pulled Point with Bottom Spring, 250 µL Usable Volume	100	**N9300703**
6 mm x 31 mm Clear Glass Flat Bottom Insert, 400 µL Usable Volume	100	**N9300704**
Use with: 10 mm 2 mL Amber Screw Top Vial w/White "P" Icon w/Patch		**N9306057**
10 mm 2 mL Clear Screw Top Vial w/White "P" Icon w/Patch		**N9306053**
11 mm Clear Large Opening Snap Ring Vial w/Black "P" Icon		**N9303418**
11 mm Clear Large Opening Crimp Vial w/Black "P" Icon		**N9306231**
9 mm 2 mL Amber Screw Top Vial w/Black "P" Icon		**N9306220**
9 mm 2 mL Clear Screw Top Vial w/Black "P" Icon		**N9306201**
5 mm x 29 mm Clear Glass Insert, Rimles Pulled Point with Bottom Spring, 150 µL Usable Volume	100	**N9300705**
5 mm x 31 mm Clear Glass Flat Bottom Insert, 200 µL Usable Volume	100	**N9300706**
Use with: 11 mm Standard Amber Crimp Vial w/Black "P" Icon		**N9302680**
11 mm Standard Clear Crimp Vial w/Black "P" Icon		**N9301385**
8 mm 2 mL Clear Screw Top Vial w/Black "P" Icon		**N9302945**
6 mL Vials and Caps		
6 mL Glass Large-Volume Vials with 20 mm o.d. Top	125	**N9302134**
Polyethylene Press-On Slit Caps/Septa or 20 mm o.d. Top Vials	25	**N2936083**

Micro Vial Kit and Polypropylene Vial/Cap Kits

Description	Pkg.	Part No.
Polyethlene Micro Vial Kit – Pkg/500 Includes: 300 uL Tapered Screw Top Vials (Pkg/500) Blue Polypropylene 9 mm Caps w/Bonded Silicone/PTFE Septa (Pkg/500)	500	**N9306080**
1.5 mL Polypropylene Screw Top Amber Vial With Fill Lines, Teflon®/Silicone Septa and Cap With Single Slit	100	**N9301735**
1.5 mL Polypropylene Screw Top Clear Vial With Fill Lines,Teflon®/Silicone Septa and Cap With Single Slit	100	**N9301736**

EASY-TO-ORDER CONVENIENCE KITS

Certified LC Clean™ Kits (Vials and Caps/Septa sold separately.)

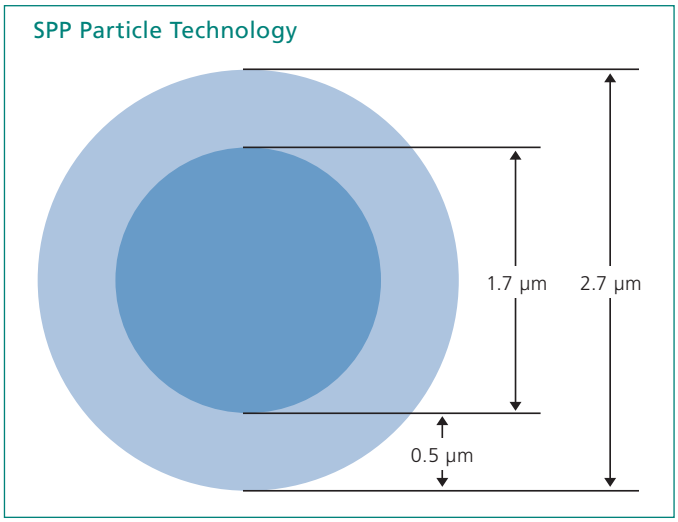
NEW

Description	Pkg.	Part No.
Certified LC Clean™ Non-Slit Cap/Vial Convenience Kit (Pkg. of 100) 9 mm 2 mL Screw Top Clear Vial with 9 mm Blue Screw Top Cap Clear Non-Slit PTFE/Silicone (LC Clean™)	100	**N9300707**
Certified LC Clean™ Pre-Slit Cap/Vial Convenience Kit (Pkg. of 100) 9 mm 2 mL Screw Top Clear Vial with 9 mm Gray Screw Top Cap Clear Pre-Slit PTFE/Silicone (LC Clean™)	100	**N9300708**
NEW Certified LC Clean™ Non-Slit Cap/Vial Convenience Kit (Pkg. of 100) 9 mm 2 mL Screw Top Amber Vial with 9 mm Blue Screw Top Cap Clear Non-Slit PTFE/Silicone (LC Clean™)	100	**N9300719**
NEW Certified LC Clean™ Pre-Slit Cap/Vial Convenience Kit (Pkg. of 100) 9 mm 2 mL Screw Top Amber Vial with 9 mm Gray Screw Top Cap Clear Pre-Slit PTFE/Silicone (LC Clean™)	100	**N9300720**

Convenience Kits (Vials and Caps/Septa sold separately.)

Description	Pkg.	Part No.
9 mm Pre-Slit PTFE/Silicone Screw Cap Convenience Kit (Pkg. of 100)		**N9300701**
9 mm Pre-Slit PTFE/Silicone Screw Cap Assembly (Pkg. of 100)	1	**N9306203**
9 mm 2 mL Clear Screw Vial Kit (Pkg. of 100)	1	**N9306201**
9 mm Red Rubber/Screw Cap Convenience Kit (Pkg. of 100)		**N9300699**
9 mm Red Rubber/Screw Cap Assembly (Pkg. of 100)	1	**N9306200**
9 mm Clear 2 mL Vial Kit (Pkg. of 100)	1	**N9306201**
9 mm PTFE/Silicone Screw Cap Convenience Kit (Pkg. of 100)		**N9300700**
9 mm PTFE/Silicone Screw Cap Assembly (Pkg. of 100)	1	**N9306202**
9 mm Clear 2 mL Vial Kit (Pkg. of 100)	1	**N9306201**
11 mm Pre-Slit PTFE/Silicone Snap Convenience Kit (Pkg. of 100)		**N9300697**
11 mm Pre-Slit PTFE/Silicone Snap Cap Assembly (Pkg. of 100)	1	**N9303416**
11 mm 2 mL Clear Snap Vial Kit (Pkg. of 100)	1	**N9303418**
11 mm PTFE/Silicone/PTFE Snap Convenience Kit (Pkg. of 100)		**N9300698**
11 mm PTFE/Silicone/PTFE Clear Snap Cap Assembly (Pkg. of 100)	1	**N9303417**
11 mm 2 mL Clear Snap Vial Kit (Pkg. of 100)	1	**N9303418**
10 mm Clear Pre-Slit PTFE/Silicone Screw Cap Convenience Kit (Pkg. of 100)		**N9300695**
10 mm Pre-Slit PTFE/Silicone Screw Cap Assembly (Pkg. of 100)	1	**N9306052**
10 mm 2 mL Clear Screw Vials with Write-On Patch and Fill Lines (Pkg. of 100)	1	**N9306053**
10 mm Amber Pre-Slit PTFE/Silicone Screw Cap Convenience Kit (Pkg. of 100)		**N9300696**
10 mm Pre-Slit PTFE/Silicone Screw Cap Assembly (Pkg. of 100)	1	**N9306052**
10 mm 2 mL Amber Screw Top Vials with Write-On Patch and Fill Lines (Pkg. of 100)	1	**N9306057**
11 mm PTFE/Silicone Snap Convenience Kit (Pkg. of 100)		**N9300702**
11 mm PTFE/Silicone Snap Cap Assembly (Pkg. of 100)	1	**N9303419**
11 mm 2 mL Clear Snap Vial Kit (Pkg. of 100)	1	**N9303418**
11 mm Red Rubber Crimp Convenience Kit (Pkg. of 100)		**N9300502**
11 mm Red Rubber/Silver Crimp Assembly (Pkg. of 100)	1	**N9306230**
11 mm 2 mL Clear Vial Kit (Pkg. of 100)	1	**N9306231**
11 mm Red Rubber Crimp Convenience Kit (Pkg. of 500)		**N9300503**
11 mm Red Rubber/Silver Crimp Assembly (Pkg. of 100)	5	**N9306230**
11 mm 2 mL Clear Vial Kit (Pkg. of 100)	5	**N9306231**
11 mm PTFE/Silicone Crimp Convenience Kit (Pkg. of 100)		**N9300500**
11 mm PTFE/Silicone Crimp Assembly (Pkg. of 100)	1	**N9306228**
11 mm 2 mL Clear Vial Kit (Pkg. of 100)	1	**N9306231**
11 mm PTFE/Silicone/PTFE Crimp Convenience Kit (Pkg. of 100)		**N9300501**
11 mm PTFE/Silicone/PTFE Crimp Assembly (Pkg. of 100)	1	**N9306229**
11 mm 2 mL Clear Vial Kit (Pkg. of 100)	1	**N9306231**

INNOVATION TO THE CORE



Smaller in size and innovative in design, superficially porous particles are made by fusing a porous silica layer to a solid inner core.

Brownlee SPP HPLC and UHPLC Column Solutions

Say goodbye to the limitations of traditional columns and experience greater speed, lasting durability and better results from your Liquid Chromatography instrument.

Brownlee Superficially Porous Particle (SPP) columns produce sharper peaks and faster separation results. These results are possible due to their breakthrough particle design and size. Brownlee SPP columns use 2.7 µm particles comprised of a thin outer shell of high-quality porous silica fused to a solid inner core. This advanced design allows for a shorter diffusion path, reducing the time solute molecules spend inside the particles while passing through the stationary phase.

Brownlee SPP Phases and Applications

UHPLC Phases*	PoreSize (Å)	Coverage (µmol/m^2)	pH Range	Temp Limit (°C)	Applications	Chromatographic Properties
C18	90	3.5	2 to 9	60	General Purpose Octadecyl phase for reversed phase separations.	A high-purity column that exhibits excellent peak shape for a wide range of compounds.
C8	90	3.7	2 to 9	60	General Purpose Octyl phase for reversed phase separations when less retention than a C18 is desired.	High purity reversed phase packing that exhibits excellent peak shape for a wide range of compounds.
HILIC**	90	N/A	2 to 8	60	General purpose bare silica column for normal phase and HILIC applications.	High purity silica substrate.
Peptide ES-C18**	160	2.0	1 to 8	90	Sterically protected ligand (isobutyl - side chains), results in an extra stable bonded phase at low pH where most peptide separations are performed.	The 160 Angstrom pore size was specially chosen for the molecular weight range of peptides. The ligand was chosen due to its sterically protected bonding technology that inhibits acid hydrolysis of the siloxane bonds, even under extremes of high temperature and low pH.
PFP (pentafluoro-phenylpropyl)	90	3.6	2 to 8	60	Highly retentive and selective for protonated basic analytes and molecules containing aromatic moities.	End-capped pentafluorophenyl with a propyl spacer.
PhenylHexyl	90	3.0	2 to 9	60	Alternative selectivity to alkyl bonded phases, recommended for aromatic groups. Compatible with highly aqueous mobile phases to facilitate the retention and separation of polar compounds.	Base-deactivated for good peak shapes when separating basic compounds. Hexyl spacer provides optimal flexibility for phenyl ring to facilitate π-π interactions with solutes.
RP-Amide	90	3.0	2 to 9	60	Excellent phase for significantly increasing the retention and selectivity of acids, for symmetrical peak shapes of bases, zwitterions and other polar compounds.	Base-deactivated phase with a polar group within the alkyl bonded phase. Provides unique selectivity and a high level of base deactivation while reducing or eliminating the need for mobile phase additives.

* Maximum pressure 9,000 p.s.i. for all columns. All particle sizes are 2.7 µm.
**Not end-capped. All others end-capped.

THE TECHNOLOGY YOU NEED TO SEPARATE FROM THE PACK

Brownlee Instrument Optimizaton Kits

Brownlee SPP columns can be used to enhance the performance of virtually any PerkinElmer, Agilent, or other manufacturer's HPLC or UHPLC system. Our SPP columns deliver resolution and speed similar to sub-2 µm UHPLC columns, but generate only 40% to 50% of the backpressure. By combining high efficiency and lower backpressure, Brownlee SPP columns make it possible to get "UHPLC-like" performance from your HPLC system.

PerkinElmer has created, tested and made the following PerkinElmer and Agilent optimization kits available. Our OneSource Service Engineers are certified on all leading manufacturer instruments and can help optimize your instrument's performance.

Benefits:

- Generate UHPLC like separations on your standard HPLC system
- Achieve ultra fast performance and efficiency on your UHPLC system
- Run samples in a fraction of the time
- Experience significant savings through faster method development, column longevity and use of less mobile phase solvent

PerkinElmer Optimization Kits

Description	Part No.
Series 200 LC or Flexar UHPLC systems with UV/Vis detector	**N2920191**
Series 200 LC or Flexar UHPLC systems with PDA detector	**N2920193**

Agilent Optimization Kits

Description	Part No.
Extra column volume (ECV) - STD Autosampler and Variable Wavelength Detector (VWD) Optimization Kit	**ZECVSTDVWD**
ECV - STD Well Plate Autosampler and Diode Array Detector/Multiple Wave-length Detector (DAD/MWD)	**ZECVSTDWPDADMWD**
ECV - STD Autosampler and DAD/MWD	**ZECVSTDDADMWD**
ECV - STD Well Plate Autosampler and VWD	**ZECVSTDWPVWD**
Ultra Low ECV - STD Autosampler and VWD	**ZULECVSTDVWD**
Ultra Low ECV - STD Well Plate Autosampler and DAD/MWD	**ZULECVSTDWPDADMWD**
Ultra Low ECV - STD Autosampler and DAD/MWD	**ZULECVSTDDADMWD**
Ultra Low ECV - STD Well Plate Autosampler and VWD	**ZULECVSTDWPVWD**

Performance For Every Phase

Brownlee SPP 2.7 µm Columns

Diameter/Length	Part No.
C18	
2.1 x 20 mm	**N9308400**
2.1 x 30 mm	**N9308401**
2.1 x 50 mm	**N9308402**
2.1 x 75 mm	**N9308403**
2.1 x 100 mm	**N9308404**
2.1 x 150 mm	**N9308405**
3.0 x 20 mm	**N9308406**
3.0 x 30 mm	**N9308407**
3.0 x 50 mm	**N9308408**
3.0 x 75 mm	**N9308409**
3.0 x 100 mm	**N9308410**
3.0 x 150 mm	**N9308411**
4.6 x 20 mm	**N9308412**
4.6 x 30 mm	**N9308413**
4.6 x 50 mm	**N9308414**
4.6 x 75 mm	**N9308415**
4.6 x 100 mm	**N9308416**
4.6 X 150 mm	**N9308417**
Peptide ES-C18	
2.1 x 30 mm	**N9308450**
2.1 x 50 mm	**N9308451**
2.1 x 75 mm	**N9308452**
2.1 x 100 mm	**N9308453**
2.1 x 150 mm	**N9308454**
3.0 x 30 mm	**N9308455**
3.0 x 50 mm	**N9308456**
3.0 x 75 mm	**N9308457**
3.0 x 100 mm	**N9308458**
3.0 x 150 mm	**N9308459**
4.6 x 30 mm	**N9308460**
4.6 x 50 mm	**N9308461**
4.6 x 75 mm	**N9308462**
4.6 x 100 mm	**N9308463**
4.6 x 150 mm	**N9308464**
C8	
2.1 x 20 mm	**N9308418**
2.1 x 30 mm	**N9308419**
2.1 x 50 mm	**N9308420**
2.1 x 75 mm	**N9308421**
2.1 x 100 mm	**N9308422**
2.1 x 150 mm	**N9308423**
3.0 x 30 mm	**N9308424**
3.0 x 50 mm	**N9308425**
3.0 x 75 mm	**N9308426**
3.0 x 100 mm	**N9308427**
3.0 x 150 mm	**N9308428**
4.6 x 20 mm	**N9308429**

Diameter/Length	Part No.
4.6 x 30 mm	**N9308430**
4.6 x 50 mm	**N9308431**
4.6 x 75 mm	**N9308432**
4.6 x 100 mm	**N9308433**
4.6 x 150 mm	**N9308434**
PFP	
2.1 x 20 mm	**N9308465**
2.1 x 30 mm	**N9308466**
2.1 x 50 mm	**N9308467**
2.1 x 75 mm	**N9308468**
2.1 x 100 mm	**N9308469**
2.1 x 150 mm	**N9308470**
3.0 x 30 mm	**N9308471**
3.0 x 50 mm	**N9308472**
3.0 x 75 mm	**N9308473**
3.0 x 100 mm	**N9308474**
3.0 x 150 mm	**N9308475**
4.6 x 30 mm	**N9308476**
4.6 x 50 mm	**N9308477**
4.6 x 75 mm	**N9308478**
4.6 x 100 mm	**N9308479**
4.6 x 150 mm	**N9308480**
HILIC	
2.1 x 30 mm	**N9308435**
2.1 x 50 mm	**N9308436**
2.1 x 75 mm	**N9308437**
2.1 x 100 mm	**N9308438**
2.1 x 150 mm	**N9308439**
3.0 x 30 mm	**N9308440**
3.0 x 50 mm	**N9308441**
3.0 x 75 mm	**N9308442**
3.0 x 100 mm	**N9308443**
3.0 x 150 mm	**N9308444**
4.6 x 30 mm	**N9308445**
4.6 x 50 mm	**N9308446**
4.6 x 75 mm	**N9308447**
4.6 x 100 mm	**N9308448**
4.6 x 150 mm	**N9308449**
Phenyl-Hexyl	
2.1 x 20 mm	**N9308481**
2.1 x 30 mm	**N9308482**
2.1 x 50 mm	**N9308483**
2.1 x 75 mm	**N9308484**
2.1 x 100 mm	**N9308485**
2.1 x 150 mm	**N9308486**
3.0 x 30 mm	**N9308487**
3.0 x 50 mm	**N9308488**
3.0 x 75 mm	**N9308489**
3.0 x 100 mm	**N9308490**
3.0 x 150 mm	**N9308491**
4.6 x 30 mm	**N9308492**

Diameter/Length	Part No.
4.6 x 50 mm	**N9308493**
4.6 x 75 mm	**N9308494**
4.6 x 100 mm	**N9308495**
4.6 x 150 mm	**N9308496**
RP-Amide	
2.1 x 20 mm	**N9308497**
2.1 x 30 mm	**N9308498**
2.1 x 50 mm	**N9308499**
2.1 x 75 mm	**N9308500**
2.1 x 100 mm	**N9308501**
2.1 x 150 mm	**N9308502**
3.0 x 30 mm	**N9308503**
3.0 x 50 mm	**N9308504**
3.0 x 75 mm	**N9308505**
3.0 x 100 mm	**N9308506**
3.0 x 150 mm	**N9308507**
4.6 x 30 mm	**N9308508**
4.6 x 50 mm	**N9308509**
4.6 x 75 mm	**N9308510**
4.6 x 100 mm	**N9308511**
4.6 x 150 mm	**N9308512**
C18 Guard Column Packs	
2.1 x 5 mm, 3 pk	**N9308513**
3.0 x 5 mm, 3 pk	**N9308514**
4.6 x 5 mm, 3 pk	**N9308515**
C8 Guard Column Packs	
2.1 x 5 mm, 3 pk	**N9308522**
3.0 x 5 mm, 3 pk	**N9308523**
4.6 x 5 mm, 3 pk	**N9308524**
HILIC Guard Column Packs	
2.1 x 5 mm, 3 pk	**N9308525**
3.0 x 5 mm, 3 pk	**N9308526**
4.6 x 5 mm, 3 pk	**N9308527**
Peptide ES-C18 Guard Column Packs	
2.1 x 5 mm, 3 pk	**N9308528**
3.0 x 5 mm, 3 pk	**N9308529**
4.6 x 5 mm, 3 pk	**N9308530**
PFP Guard Column Packs	
2.1 x 5 mm, 3 pk	**N9308531**
3.0 x 5 mm, 3 pk	**N9308532**
4.6 x 5 mm, 3 pk	**N9308533**
Phenyl-Hexyl Guard Column Packs	
2.1 x 5 mm, 3 pk	**N9308519**
3.0 x 5 mm, 3 pk	**N9308520**
4.6 x 5 mm, 3 pk	**N9308521**
RP-Amide Guard Column Packs	
2.1 x 5 mm, 3 pk	**N9308516**
3.0 x 5 mm, 3 pk	**N9308517**
4.6 x 5 mm, 3 pk	**N9308518**
Guard Column Holder	
	N9308534

BROWNLEE UHPLC 15,000 PSI COLUMNS

Brownlee Columns for HRes™ Fast-LC (1.9 µm Particle Size)

Recent developments in LC column technology have now made the use of sub 3 µm particle packing materials practical. These smaller particle size materials allow higher mobile phase linear velocities to be used, without the decrease in separation efficiency experienced with conventional larger particle size packings. This translates into higher throughput and higher productivity. To conserve mobile phase, these sub 3 µm column materials are typically packed into 2.1 mm i.d. columns so that flow rates (mobile phase volume) are kept low. However, smaller sized packings result in elevated operating pressures. Technological advances in pump and injector designs have also kept pace, and these columns can be used at pressures as high as 10,000 psi with the PerkinElmer Series 275 or up to 15,000 psi using FX15 LC systems.

The rugged construction of this new line of small particle columns for high pressure application yield excellent longevity and reproducibility. These packings exhibit an exceptionally tight particle size distribution for excellent resolving power and are packed at elevated pressures to assure column stability even at high pressure applications. Each column is tested to ensure the highest level of quality and efficiency in high pressure LC testing.

Features and Benefits

- Sub 3 µm particle technology and 2.1 mm i.d. for higher separation efficiency
- Packed to withstand higher operating pressures
- Wide choice of stationary phases

Description	Length	Part No.
Brownlee HRes Biphenyl	30 mm	**N9303911**
Brownlee HRes Biphenyl	50 mm	**N9303912**
Brownlee HRes Biphenyl	100 mm	**N9303913**
Brownlee HRes PFP Propyl	30 mm	**N9303914**
Brownlee HRes PFP Propyl	50 mm	**N9303915**
Brownlee HRes PFP Propyl	100 mm	**N9303916**
Brownlee HRes Aqueous C18	30 mm	**N9303917**
Brownlee HRes Aqueous C18	50 mm	**N9303918**
Brownlee HRes Aqueous C18	100 mm	**N9303919**
Brownlee HRes IBD	30 mm	**N9303920**
Brownlee HRes IBD	50 mm	**N9303921**
Brownlee HRes IBD	100 mm	**N9303922**
Brownlee HRes Analytical C18	30 mm	**N9303852**
Brownlee HRes Analytical C18	50 mm	**N9303853**
Brownlee HRes Analytical C18	100 mm	**N9303854**
Brownlee HRes Analytical DB Silica	30 mm	**N9303970**
Brownlee HRes Analytical DB Silica	50 mm	**N9303971**
Brownlee HRes Analytical DB Silica	100 mm	**N9303972**
Brownlee HRes Analytical DB Cyano	30 mm	**N9303973**
Brownlee HRes Analytical DB Cyano	50 mm	**N9303974**
Brownlee HRes Analytical DB Cyano	100 mm	**N9303975**
Brownlee HRes Analytical DB PAH	50 mm	**N9303995**
Brownlee HRes Analytical DB PAH	100 mm	**N9303996**

Phase	End Cap?	Carbon Load	Applications	Chromatographic Properties
C18	Y	11	Hydrophobic C18 Phase suitable for analyses of a wide range of compounds, from acidic through slightly basic.	Highly base-deactivated spherical silica. Monomeric C18 bonding.
Aqueous C18	N	6	Ideal for applications that require highly aqueous mobile phases, such as organic acids and water-soluble vitamins.	Highly selective phase for polar analytes. Compatible with highly aqueous (up to 100%) mobile phases.
Biphenyl	Y	8	Excellent choice for the analysis of steroids, tetracyclines, drug metabolites, and other compounds that contain some degree of unsaturation.	Highly base-deactivated spherical silica. Unique reversed phase material that displays both increased retention and selectivity for aromatic and/or unsaturated compounds when compared to conventional alkyl and phenyl phases.
PFPP	Y	6	Exhibits excellent peak shapes for a wide range of compounds, including nucleosides, nucleotides, and halogenated compounds.	Highly base-deactivated spherical silica. Unique pentafluorophenyl phase with a propyl spacer.
IBD	N	-	Excellent phase for significantly increasing the retention and selectivity of acids, for symmetrical peak shapes of bases and for the analysis of zwitterions and other polar compounds.	Intrinsically base-deactivated (IBD) phases, with a polar group within, or intrinsic to, the alkyl bonded phase. Provides unique selectivity and a high level of base deactivation while reducing or eliminating the need for mobile phase additives.
Silica	-	-	Normal phase mode of separation.	Highly base-deactivated spherical silica.
C8	Y	7	Superior general purpose C8 for non-basic analytes.	Provides shorter retention times for hydrophobic compounds than C18.
PAH	Y	-	Maximum resolution of polycyclic aromatic hydrocarbons.	Proprietary stationary phase; resloves 16 PAHs in US EPA Method 610.
Cyano	Y	4	Superior general purpose cyano for weakly-basic analytes. Used in either normal or reversed phase analyses.	More rugged than bare silica for normal phase analyses.

Pore Size A = 140, pH Range = 2.5-8, Temp Limit = 80°C, Particle Size = 1.9 µm

Conventional columns do not require MPLC holders.

Brownlee Conventional Columns

Conventional Brownlee Columns (non-cartridge) use standard compression end fittings compatible with all HPLC instrumentation. These columns do not require MPLC holders.

Features and Benefits

- End fittings compatible with HPLC systems from any vendor
- Use with NewGuard system (line connection) for even longer column life
- Each column is individually tested

250 mm, 100 mm Microbore Columns (1.0 mm i.d.)

Brownlee Microbore HPLC Columns

Microbore columns (1.0 mm i.d.) are ideal for the analysis of samples of limited availability (e.g., micropurification of picomole levels of proteins/peptides). Reducing the column diameter from the standard 4.6 mm to 1.0 mm increases the mass sensitivity by 20 times. Sample components can be collected in small elution volumes (1–50 µL) for further sequence or mass analysis. Microbore offers major benefits in pharmacokinetic assays and LC/MS applications. The typical flow rate range is 10–100 µL/min., therefore specialized HPLC systems may be required for optimum column performance.

Features and Benefits

- Increase sensitivity and decrease solvent consumption by a factor of 20 (compared with 4.6 mm i.d.)
- Reduce sample size for pharmacokinetic assays
- Better compatibility with LC/MS interfaces
- Each column is individually tested

Modes of Separation

Reversed-Phase Chromatography (RPC) is the most popular HPLC mode and is used in 60–80% of all applications. In RPC, hydrophobic groups (C18, C8, or C4) bonded to a silica support are used together with a mobile phase of water and organic solvent (e.g. methanol, acetonitrile).

Polar Phase (Normal Phase) Chromatography (NPC) uses a polar stationary phase (unbonded silica, bonded amino or cyano group) together with a non-polar mobile phase (e.g., hexane). NPC is useful for functional group analysis, isomeric separations, purification of organics, and sample cleanup.

Ion-Exchange Chromatography (IEC) utilizes bonded ionic groups to separate ionic analytes. Retention is based on the affinity of various analyte ions for the stationary phase and various mobile phase parameters (e.g., pH, ionic strength).

Brownlee Analytical

This is PerkinElmer's all-purpose HPLC column line for conventional as well as high speed LC separations. The (110 Å) silica is equivalent to the Hypersil. Columns are available in 3 or 5 µ and lengths ranging from 30–250 mm, in 2.1 and 4.6 i.d. The Brownlee Analytical family includes Amino, C18, C8, Cyano, Phenyl, Silica, and PAH phases.

Brownlee Aquapore®

This is a wide-pore (300 Å, 7, and 20 µm), silica-based support suitable for the separation of large biopolymers.

Brownlee Bio

This material is wide-pore silica (300 Å) that is excellent for peptide and protein separation. Columns are available in 5 µ and lengths ranging from 30–250 mm, in 2.1 and 4.6 i.d. in C8 and C18 phases.

Brownlee CHOICE™

This line of columns is made of (60 Å) silica which results in large surface area, high carbon loads, and high retention compounds. Columns are available in 3 or 5 µm and lengths ranging from 30–250 mm, in 2.1 and 4.6 i.d. The Brownlee Choice family includes the Basix, C18, Organic Acids, and PFP Propyl phases.

Brownlee Spheri-5®

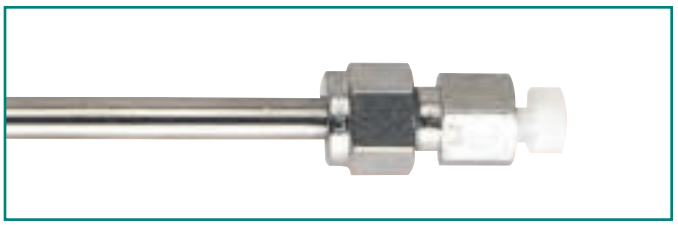
This is a small-pore (80 Å, 5 µm), silica based sorbent for separating small molecules. Both monofunctional (comb-pre) and polyfunctional (polymerized loop-type) C8 and C18 sorbents available.

Brownlee Validated™

These columns are made on high-purity, Type B silica with inherent low silanophilic activity. It exhibits excellent peak shape for a wide range of compounds while also having a wide number of phases. The Brownlee Validated columns are the best choice for pharmaceutical applications that deal with a lot of basic or multi-functional compounds. Columns are available in 3 or 5 µ and lengths ranging from 30–250 mm, in 2.1 and 4.6 i.d., and include Amino, C18, C8, Carbamate, Cyano, IBD (intrinsically base-deactivated), PFP (pentafluorophenyl) and phenyl phases.

Guard Columns and Cartridges

To protect your column investment, we offer a complete line of guard columns in our direct connect guard cartridges. These can be attached to any column offered above. You can easily select the phase type to the appropriate guard column packing to ensure a correct silica match.



Brownlee Columns

Choose only genuine PerkinElmer Brownlee™ columns for the best separation results. Six different column types to meet all your analytical needs.

Features and Benefits

- Each column individually tested and certificate provided
- End fittings compatible with a variety of HPLC systems
- Do not require MPLC holders

Conventional Columns

Conventional columns do not require MPLC holders.

Column	Functionality	Pore Diameter Å	% Carbon	End Cap	Applications
Analytical	Amino	110	2	No	Excellent for carbohydrate analysis
Analytical	C18 & C8	110	13	Yes	Superior for non-basic analytes
Analytical	Cyano	110	4	Yes	General purpose for normal or reversed-phase
Analytical	Biphenyl	110	–	Yes	U.S. EPA Method 8330
Analytical	Phenyl	110	6	Yes	General purpose for neutral analytes
Analytical	Silica	110	–	–	Ideal for polar analytes
Analytical	PAH	110	–	Yes	Maximum resolution of polynuclear aromatic hydrocarbons
Aquapore®	AX-300	300	–	–	Used for ion exchange chromatography
Aquapore	Octyl C8	300	–	–	Used for reversed-phase chromatography
Aquapore	ODS C18	300	–	–	Silica based support used for the separation of large biopolymers
Bio	C18	300	6	Yes	High molecular weight compounds and proteins
Bio	C8	300	–	–	High molecular weight compounds and proteins
CHOICE™	Basix	60	12	Yes	Ideal for LC/MS. Excellent for amine-containing compounds and basic pharmaceuticals
CHOICE	C18	60	27	Yes	Excellent for explosives or steroids
CHOICE	Biphenyl	60	23	Yes	Highly retentive and selective phase for aromatic compounds
CHOICE	Organic Acids	60	–	No	Used for challenging organic acids
CHOICE	PFP Propyl	60	17	Yes	Ideal for MS, ELSD, or NPD detection of nucleosides, nucleotides, purines, pyrimidines or halogenated compounds
Spheri-5®	C8, C18, C18 ODS and Silica	80	–	–	Excellent for separating small molecules both non-functional and polyfunctional
Validated™	Amino	100	2	No	Ideal for carbohydrates
Validated	C1	100	5	–	Least retentive reversed-phase hydrocarbon packing
Validated	C4	100	9	Yes	High bonding coverage and base deactivation
Validated	Aqueous C18	100	15	No	Excellent for highly water-soluble or poorly organic-soluble compounds
Validated	C18	100	20	Yes	Used for the detection of anilines, barbiturates, carbonyls, fat-soluble vitamins, fatty acids, glycerides, phthalates
Validated	C8	100	12	Yes	Less hydrophobic retention than C18
Validated	Carbamate	100	–	–	Fast analysis of carbamates
Validated	Cyano	100	8	Yes	Basic pharmaceuticals and steroids
Validated	IBD	100	12	No	Unique separation for acids, bases, zwitterions and other polar compounds
Validated	PFP	100	7	Yes	Ideal for taxors and precursors or halogenated compounds
Validated	Phenyl	100	10	Yes	Separation of fatty acids, polynuclear aromatic hydrocarbons, purines and pyrimidines
Validated	Quat	100	–	–	High purity, base deactivated reversed-phase packing

Brownlee Analytical Conventional Columns

Brownlee Analytical Amino

Ideal column for mono and disaccharide analyses. Most popular amino-based stationary phase. Routine analysis of simple sugars, using isocratic elution and a refractive index detector or an evaporative light scattering detector.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C
Pore size: 110 Å - **Carbon load:** 2% - **End Cap:** No

Phase	Length	ID	Particle Size	Part No.
Amino	50 mm	4.6 mm	3 µm	**N9303502**
Amino	100 mm	4.6 mm	3 µm	**N9303500**
Amino	150 mm	4.6 mm	3 µm	**N9303501**
Amino	50 mm	4.6 mm	5 µm	**N9303506**
Amino	100 mm	4.6 mm	5 µm	**N9303503**
Amino	150 mm	4.6 mm	5 µm	**N9303504**
Amino	250 mm	4.6 mm	5 µm	**N9303505**

Brownlee Analytical C8

Shorter retention times for hydrophobic compounds. Reliable performance with symmetrical peak shapes for neutral to acidic compounds.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C
Pore size: 100 Å - **Carbon load:** 7% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C8	30 mm	4.6 mm	5 µm	**N9303521**
C8	100 mm	4.6 mm	5 µm	**N9303515**
C8	150 mm	4.0 mm	5 µm	**N9303516**
C8	150 mm	4.6 mm	5 µm	**N9303517**
C8	200 mm	4.6 mm	5 µm	**N9303518**
C8	250 mm	4.0 mm	5 µm	**N9303519**
C8	250 mm	4.6 mm	5 µm	**N9303520**

Brownlee Analytical C18

Suitable for a wide range of acidic to neutral hydrophobic compounds. Excellent all purpose column.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C
Pore size: 110 Å - **Carbon load:** 13% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C18	30 mm	4.6 mm	3 µm	**N9303509**
C18	50 mm	4.6 mm	3 µm	**N9303510**
C18	100 mm	4.6 mm	3 µm	**N9303507**
C18	150 mm	4.6 mm	3 µm	**N9303508**
C18	100 mm	4.0 mm	5 µm	**N9303511**
C18	100 mm	4.6 mm	5 µm	**N9303512**
C18	150 mm	4.6 mm	5 µm	**N9303513**
C18	250 mm	4.6 mm	5 µm	**N9303514**

Brownlee Analytical Cyano

Suitable for analyses of a wide range of compounds from acidic through slightly basic. Highly base-deactivated spherical silica.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C
Pore size: 110 Å - **Carbon load:** 4% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
Cyano	150 mm	4.6 mm	5 µm	**N9303522**
Cyano	250 mm	4.6 mm	5 µm	**N9303523**

Brownlee Analytical PAH

Specifically designed for challenging analyses of polynuclear aromatic hydrocarbons.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C
Pore size: 110 Å - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
PAH	100 mm	4.6 mm	5 µm	**N9303527**
PAH	150 mm	3.2 mm	5 µm	**N9303430**
PAH	150 mm	4.6 mm	5 µm	**N9303529**
PAH	200 mm	4.6 mm	5 µm	**N9303528**
PAH	250 mm	2.1 mm	5 µm	**N9303530**
PAH	250 mm	4.6 mm	5 µm	**N9303531**

Brownlee Analytical Phenyl

Unique selectivity especially for aromatic compounds.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C
Carbon load: 6% - **Pore size:** 110 Å - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
Phenyl	150 mm	4.6 mm	5 µm	**N9303524**

Brownlee Analytical Silica

Good general purpose packing for normal phase separations.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C
Pore size: 110 Å - **End Cap:** No

Phase	Length	ID	Particle Size	Part No.
Silica	150 mm	4.6 mm	5 µm	**N9303525**
Silica	250 mm	4.6 mm	5 µm	**N9303526**

Brownlee Aquapore Conventional Columns

Brownlee Aquapore AX-300

Used for Ion Exchange chromatography.

Pore Size: 300 Å

Phase	Length	ID	Particle Size	Part No.
AX-300	250 mm	4.6 mm	7 µm	**07120040**

Brownlee Aquapore Octyl C8

Used for Reversed Phase chromatography.

Pore Size: 300 Å

Phase	Length	ID	Particle Size	Part No.
C8	100 mm	1.0 mm	7 µm	**07120096**
C8	250 mm	1.0 mm	7 µm	**07120097**
C8	250 mm	4.6 mm	7 µm	**07120033**

Brownlee Aquapore ODS C18

Silica-based support suitable for the separation of large biopolymers. Microbore columns increase sensitivity, reduce sample size, and have better compatibility with LC/MS interfaces.

Pore Size: 300 Å

Phase	Length	ID	Particle Size	Part No.
C18	100 mm	1.0 mm	7 µm	**07120099**
C18	250 mm	4.6 mm	7 µm	**07120073**

Brownlee Bio Conventional Columns

Brownlee Bio C8

Wide-pore HPLC Column. High proportion of pore/surface area available for large molecule separations.

Pore Size: 300 Å - **Carbon Load:** 6% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C8	50 mm	2.1 mm	5 µm	**N9303664**
C8	50 mm	4.6 mm	5 µm	**N9303665**
C8	100 mm	2.1 mm	5 µm	**N9303656**
C8	100 mm	4.6 mm	5 µm	**N9303657**
C8	150 mm	2.1 mm	5 µm	**N9303658**
C8	150 mm	4.6 mm	5 µm	**N9303659**
C8	200 mm	2.1 mm	5 µm	**N9303660**
C8	200 mm	4.6 mm	5 µm	**N9303661**
C8	250 mm	2.1 mm	5 µm	**N9303662**
C8	250 mm	4.6 mm	5 µm	**N9303663**

Brownlee Bio C18

Excellent for separating peptides or proteins. Wide-pore HPLC Column.

Pore Size: 300 Å - **Carbon Load:** 6% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C18	50 mm	2.1 mm	5 µm	**N9303654**
C18	50 mm	4.6 mm	5 µm	**N9303655**
C18	100 mm	2.1 mm	5 µm	**N9303646**
C18	100 mm	4.6 mm	5 µm	**N9303647**
C18	150 mm	2.1 mm	5 µm	**N9303648**
C18	150 mm	4.6 mm	5 µm	**N9303649**
C18	200 mm	2.1 mm	5 µm	**N9303650**
C18	200 mm	4.6 mm	5 µm	**N9303651**
C18	250 mm	2.1 mm	5 µm	**N9303652**
C18	250 mm	4.6 mm	5 µm	**N9303653**

Brownlee CHOICE Conventional Columns

Brownlee CHOICE Basix

Excellent choice for analytes containing amine group functionality.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C - **Pore Size:** 60 Å - **Carbon Load:** 12% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
Basix	50 mm	2.1 mm	5 µm	**N9303615**
Basix	50 mm	4.6 mm	5 µm	**N9303616**
Basix	100 mm	2.1 mm	5 µm	**N9303613**
Basix	100 mm	4.6 mm	5 µm	**N9303614**
Basix	150 mm	2.1 mm	5 µm	**N9303617**
Basix	150 mm	4.6 mm	5 µm	**N9303618**
Basix	250 mm	4.6 mm	5 µm	**N9303619**

Brownlee CHOICE C18

Excellent choice for LC/MS. Highly retentive phase for hydrophobic and slightly polar analytes.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C - **Pore Size:** 60 Å - **Carbon Load:** 27% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C18	50 mm	2.1 mm	5 µm	**N9303626**
C18	100 mm	2.1 mm	5 µm	**N9303625**
C18	150 mm	2.1 mm	5 µm	**N9303627**
C18	150 mm	4.6 mm	5 µm	**N9303628**
C18	250 mm	2.1 mm	5 µm	**N9303629**
C18	250 mm	4.6 mm	5 µm	**N9303630**

Brownlee CHOICE Organic Acids

Enhanced retention and selectivity for polar organic acids. Retention is stable and reproducible even with 100% aqueous mobile phase specified in the AOAC method.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C - **Pore Size:** 60 Å - **End Cap:** No

Phase	Length	ID	Particle Size	Part No.
Organic Acids	150 mm	4.6 mm	5 µm	**N9303631**
Organic Acids	250 mm	2.1 mm	5 µm	**N9303632**
Organic Acids	250 mm	4.6 mm	5 µm	**N9303633**
Organic Acids	300 mm	4.6 mm	5 µm	**N9303634**

Brownlee CHOICE Propyl

Highly retentive for basic analytes. Excellent separation of nucleosides, nucleotides, purines, pyrimidines halogenated compounds, beta blockers and tricyclic antidepressants.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C - **Pore Size:** 60 Å - **Carbon Load:** 17% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
PFP Propyl	30 mm	2.1 mm	5 µm	**N9303640**
PFP Propyl	50 mm	2.1 mm	5 µm	**N9303641**
PFP Propyl	50 mm	4.6 mm	5 µm	**N9303642**
PFP Propyl	100 mm	2.1 mm	5 µm	**N9303638**
PFP Propyl	100 mm	4.6 mm	5 µm	**N9303639**
PFP Propyl	150 mm	2.1 mm	5 µm	**N9303643**
PFP Propyl	150 mm	4.6 mm	5 µm	**N9303644**
PFP Propyl	250 mm	4.6 mm	5 µm	**N9303645**

Brownlee Spheri-5 Conventional Columns

Brownlee Spheri-5®

Small pore silica-based sorbent for separating small molecules both non-functional and polyfunctional C8 and C18 are available.

Length: 250 mm - **ID:** 4.6 mm - **Pore Size:** 80 Å

Phase	Length	ID	Particle Size	Part No.
C2	250 mm	4.6 mm	10 µm	**07120005**
C8	250 mm	4.6 mm	5 µm	**07120012**
C18	250 mm	4.6 mm	5 µm	**07120016**
C18	250 mm	4.6 mm	10 µm	**07120001**
C18 ODS	250 mm	4.6 mm	5 µm	**07120019**
Silica	250 mm	4.6 mm	5 µm	**07120023**

Brownlee Validated Conventional Columns

Brownlee Validated™ Amino

Good for normal phase analytes of mono- and disaccharides or similar compounds.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Particle Size: 5 µm - **Pore Size:** 100 Å - **Carbon Load:** 2%

Phase	Length	ID	Particle Size	Part No.
Amino	100 mm	2.1 mm	5 µm	**N9303532**
Amino	150 mm	2.1 mm	5 µm	**N9303533**
Amino	150 mm	4.6 mm	5 µm	**N9303534**
Amino	200 mm	4.6 mm	5 µm	**N9303535**
Amino	250 mm	4.6 mm	5 µm	**N9303536**

Brownlee Validated Aqueous C18

Highly base deactivated. Compatible with highly aqueous mobile phases.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 15% - **End Cap:** No

Phase	Length	ID	Particle Size	Part No.
Aqueous C18	30 mm	2.1 mm	3 µm	**N9303540**
Aqueous C18	50 mm	2.1 mm	3 µm	**N9303541**
Aqueous C18	50 mm	4.6 mm	3 µm	**N9303542**
Aqueous C18	100 mm	2.1 mm	3 µm	**N9303537**
Aqueous C18	100 mm	4.6 mm	3 µm	**N9303538**
Aqueous C18	150 mm	2.1 mm	3 µm	**N9303539**
Aqueous C18	30 mm	4.6 mm	5 µm	**N9303550**
Aqueous C18	100 mm	2.1 mm	5 µm	**N9303543**
Aqueous C18	100 mm	4.6 mm	5 µm	**N9303544**
Aqueous C18	150 mm	2.1 mm	5 µm	**N9303545**
Aqueous C18	150 mm	4.6 mm	5 µm	**N9303546**
Aqueous C18	200 mm	4.6 mm	5 µm	**N9303547**
Aqueous C18	250 mm	2.1 mm	5 µm	**N9303548**
Aqueous C18	250 mm	4.6 mm	5 µm	**N9303549**

Brownlee Validated C1

Least retentive reversed phase hydrocarbon packing.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 5% - **End Cap:** No

Phase	Length	ID	Particle Size	Part No.
C1	150 mm	4.6 mm	5 µm	**N9303718**
C1	250 mm	4.6 mm	5 µm	**N9303719**

Brownlee Validated C4

High bonding coverage and base deactivation. Less retention than C18 or C8 phases.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 9% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C4	150 mm	4.6 mm	5 µm	**N9303720**
C4	250 mm	4.6 mm	5 µm	**N9303721**

Brownlee Validated C8

Retentive, high purity base-deactivated reversed phase packing.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 80 Å - **Carbon Load:** 12% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C8	100 mm	2.1 mm	5 µm	**N9303564**
C8	100 mm	4.6 mm	5 µm	**N9303565**
C8	150 mm	2.1 mm	5 µm	**N9303566**
C8	150 mm	4.6 mm	5 µm	**N9303567**
C8	250 mm	4.6 mm	5 µm	**N9303568**

Brownlee Validated C18

Excellent general purpose phase column.
Retentive high purity packing.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 20% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
C18	100 mm	2.1 mm	3 µm	**N9303551**
C18	100 mm	4.6 mm	3 µm	**N9303552**
C18	50 mm	2.1 mm	5 µm	**N9303562**
C18	50 mm	4.6 mm	5 µm	**N9303563**
C18	100 mm	2.1 mm	5 µm	**N9303553**
C18	100 mm	4.6 mm	5 µm	**N9303554**
C18	150 mm	2.1 mm	5 µm	**N9303556**
C18	150 mm	4.0 mm	5 µm	**N9303557**
C18	150 mm	4.6 mm	5 µm	**N9303558**
C18	200 mm	4.6 mm	5 µm	**N9303559**
C18	250 mm	2.1 mm	5 µm	**N9303560**
C18	250 mm	4.6 mm	5 µm	**N9303561**

Brownlee Validated Conventional Columns

Brownlee Validated™ Carbamate

A unique stationary phase bonded to a 3µm silica specifically designed for carbamate analysis. This column is compatible with fluorescence or LC/MS detection. Validated Carbamate column has much faster analysis, which will significantly reduce solvent usage.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C - **Pore Size:** 100 Å

Phase	Length	ID	Particle Size	Part No.
Carbamate	50 mm	4.6 mm	3 µm	**N9303570**
Carbamate	100 mm	4.6 mm	3 µm	**N9303569**
Carbamate	250 mm	4.6 mm	3 µm	**N9303571**

Brownlee Validated Cyano

High purity Cyano phase with few silanol sites. Less sensitive to small amounts of water present in the mobile phase.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 10% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
Cyano	30 mm	4.6 mm	5 µm	**N9303578**
Cyano	100 mm	2.1 mm	5 µm	**N9303572**
Cyano	100 mm	4.6 mm	5 µm	**N9303573**
Cyano	150 mm	2.1 mm	5 µm	**N9303574**
Cyano	150 mm	4.6 mm	5 µm	**N9303575**
Cyano	200 mm	4.6 mm	5 µm	**N9303576**
Cyano	250 mm	4.6 mm	5 µm	**N9303577**

Brownlee Validated IBD

Unique selectivity and a high level of base-deactivation. Reduces or eliminates the need for mobile phase additives.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 12% - **End Cap:** No

Phase	Length	ID	Particle Size	Part No.
IBD	30 mm	4.6 mm	3 µm	**N9303594**
IBD	50 mm	2.1 mm	3 µm	**N9303595**
IBD	50 mm	4.6 mm	3 µm	**N9303596**
IBD	100 mm	2.1 mm	3 µm	**N9303590**
IBD	100 mm	4.6 mm	3 µm	**N9303591**
IBD	150 mm	2.1 mm	3 µm	**N9303592**
IBD	150 mm	4.6 mm	3 µm	**N9303593**

Brownlee Validated IBD *(Continued)*

Phase	Length	ID	Particle Size	Part No.
IBD	30 mm	1.0 mm	5 µm	**N9303585**
IBD	30 mm	2.1 mm	5 µm	**N9303586**
IBD	30 mm	4.6 mm	5 µm	**N9303587**
IBD	50 mm	2.1 mm	5 µm	**N9303588**
IBD	50 mm	4.6 mm	5 µm	**N9303589**
IBD	100 mm	2.1 mm	5 µm	**N9303579**
IBD	100 mm	4.6 mm	5 µm	**N9303580**
IBD	150 mm	2.1 mm	5 µm	**N9303581**
IBD	150 mm	4.6 mm	5 µm	**N9303582**
IBD	200 mm	4.6 mm	5 µm	**N9303583**
IBD	250 mm	4.6 mm	5 µm	**N9303584**

Brownlee Validated PFP

Unique selectivity for compounds containing organohalogens or other basic functional groups.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 7% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
PFP	50 mm	2.1 mm	5 µm	**N9303601**
PFP	100 mm	4.6 mm	5 µm	**N9303597**
PFP	150 mm	2.1 mm	5 µm	**N9303598**
PFP	150 mm	4.6 mm	5 µm	**N9303599**
PFP	250 mm	4.6 mm	5 µm	**N9303600**

Brownlee Validated Phenyl

High purity, highly retentive base-deactivated phase, especially designed for aromatic analytes.

pH range: 2.5 to 7.5 - **Temperature limit:** 80° C -
Pore Size: 100 Å - **Carbon Load:** 10% - **End Cap:** Yes

Phase	Length	ID	Particle Size	Part No.
Phenyl	50 mm	1.0 mm	3 µm	**N9303604**
Phenyl	100 mm	2.1 mm	3 µm	**N9303602**
Phenyl	100 mm	4.6 mm	3 µm	**N9303603**
Phenyl	150 mm	2.1 mm	5 µm	**N9303605**
Phenyl	150 mm	4.6 mm	5 µm	**N9303606**
Phenyl	250 mm	4.6 mm	5 µm	**N9303607**

Guard Cartridges and Accessories

Guard Cartridge Accessories

Description	Part No.
10 mm guard cartridge holder with filter	**N9303713**
10 mm guard cartridge holder without filter	**N9303712**
High pressure filter	**N9303711**
Peek tip standard fittings	**N9303714**
Replacement cap frits 2.0 mm, 2.0 µm	**N9303717**
Replacement cap frits 4.0 mm, 0.5 µm	**N9303716**
Replacement cap frits 4.0 mm, 2.0 µm	**N9303715**

Guard Cartridges Brownlee Analytical

Pkg: 3

Phase	Length	ID	Particle Size	Part No.
Amino	10 mm	2.1 mm	5 µm	**N9303674**
Amino	10 mm	4.0 mm	5 µm	**N9303675**
C18	10 mm	2.1 mm	5 µm	**N9303676**
C18	10 mm	4.0 mm	5 µm	**N9303677**
C8	10 mm	2.1 mm	5 µm	**N9303678**
C8	10 mm	4.0 mm	5 µm	**N9303679**
Cyano	10 mm	2.1 mm	5 µm	**N9303680**
Cyano	10 mm	4.0 mm	5 µm	**N9303681**
PAH	10 mm	2.1 mm	5 µm	**N9303682**
PAH	10 mm	4.0 mm	5 µm	**N9303683**
Phenyl	10 mm	2.1 mm	5 µm	**N9303684**
Phenyl	10 mm	4.0 mm	5 µm	**N9303685**
Silica	10 mm	2.1 mm	5 µm	**N9303686**
Silica	10 mm	4.0 mm	5 µm	**N9303687**

Guard Cartridges Brownlee Bio

Pore Size: 300 Å - **Pkg:** 3

Phase	Length	ID	Particle Size	Part No.
C18	10 mm	2.1 mm	5 µm	**N9303708**
C18	10 mm	4.0 mm	5 µm	**N9303707**
C8	10 mm	2.1 mm	5 µm	**N9303709**
C8	10 mm	4.0 mm	5 µm	**N9303710**

Guard Cartridges Brownlee CHOICE

Pore Size: 60 Å - **Pkg:** 3

Phase	Length	ID	Particle Size	Part No.
Basix	10 mm	2.1 mm	5 µm	**N9303666**
Basix	10 mm	4.0 mm	5 µm	**N9303667**
C18	10 mm	2.1 mm	5 µm	**N9303668**
C18	10 mm	4.0 mm	5 µm	**N9303669**
Organic Acids	10 mm	2.1 mm	5 µm	**N9303670**
Organic Acids	10 mm	4.0 mm	5 µm	**N9303671**
PFP Propyl	10 mm	2.1 mm	5 µm	**N9303672**
PFP Propyl	10 mm	4.0 mm	5 µm	**N9303673**

Guard Cartridges Brownlee Validated

Pore Size: 100 Å - **Pkg:** 3

Phase	Length	ID	Particle Size	Part No.
Amino	10 mm	2.1 mm	5 µm	**N9303688**
Amino	10 mm	4.0 mm	5 µm	**N9303689**
Aqueous C18	10 mm	2.1 mm	5 µm	**N9303690**
Aqueous C18	10 mm	4.0 mm	5 µm	**N9303691**
C1	10 mm	4.0 mm	5 µm	**N9303722**
C4	10 mm	4.0 mm	5 µm	**N9303723**
C8	10 mm	2.1 mm	5 µm	**N9303695**
C8	10 mm	4.0 mm	5 µm	**N9303696**
C18	10 mm	2.1 mm	5 µm	**N9303693**
C18	10 mm	4.0 mm	5 µm	**N9303694**
C18	10 mm	4.0 mm	10 µm	**N9303692**
Carbamate	10 mm	2.1 mm	5 µm	**N9303697**
Carbamate	10 mm	4.0 mm	5 µm	**N9303698**
Cyano	10 mm	2.1 mm	5 µm	**N9303699**
Cyano	10 mm	4.0 mm	5 µm	**N9303700**
IBD	10 mm	2.1 mm	5 µm	**N9303701**
IBD	10 mm	4.0 mm	5 µm	**N9303702**
PFP	10 mm	2.1 mm	5 µm	**N9303703**
PFP	10 mm	4.0 mm	5 µm	**N9303704**
Phenyl	10 mm	2.1 mm	5 µm	**N9303705**
Phenyl	10 mm	4.0 mm	5 µm	**N9303706**

Brownlee Sorbents

PerkinElmer Brownlee™ cartridge columns are offered in a wide range of sorbent material. Choose the right sorbent for the analysis and mode of separation being used.

Aquapore® – is a wide-pore, silica-based support suitable for the separation of large biopolymers.

Spheri-5® – is a small-pore, silica-based solvent for separating small molecules. Both monofunctional (comb-type) and polyfunctional (polymerized loop-type) C8 and C18 sorbents are available.

Polypore® – is a polymer-based (microporous, 10 µm) sorbent for the analysis of organic acids and sugars.

Validated™ – is a small-pore, silica-based C18 sorbent for small molecules, specifically for consistent pharmaceutical assays.

Pecosphere™ – is a small-pore, silica-based sorbent for HPLC of small molecules.

Reduced Activity – is a small-pore, base deactivated silica-based, reversed-phase sorbent (C18 or C8) developed for HPLC of basic analytes and pharmaceuticals.

CHOICE™ – is a small-pore, base deactivated silica-based, reversed-phase sorbent (C18) developed for LC/MS separations.

Peco HCODS – is especially suited for reversed-phase separation of proteins and peptides.

Brownlee Cartridge Columns

Column	Functionality	Pore Diameter Å	% Carbon	End Cap	Applications
Aquapore	AX-300 (anion exchange)	300	-	-	Silica-based support for larger anionic compounds
Aquapore	OD-300 (C18)	300	10	Yes	Silica-based support for larger compounds by reversed-phase
Aquapore	RP-300 (C8)	300	5	Yes	Same as above, but for slightly more polar compounds
Aquapore	BU-300 (C4)	300	3	Yes	Same as above, but for even somewhat more polar compounds
Choice	C18	100	12	Yes	For high speed/efficiency separation of basic compounds/pharmaceuticals
Choice	C8	100	7	Yes	For high speed/efficiency separation of basic compounds/pharmaceuticals
Choice	PFPP (Pentafluorophenylpropyl)	100	5	Yes	For high speed/efficiency separation of basic drugs, especially for LC/MS
Pecosphere	C18, monofunctional	80	11	Yes	Reversed-phase column for fast separation of smaller compounds
Pecosphere CR	C18	80	11	Yes	Same as above, but for more basic compounds
Pecosphere CR	C8	80	11	Yes	Same as above, but, also, for slightly more polar compounds
Peco HCODS	C18, polyfunctional	300	9	No	Especially suited for reversed-phase separation of proteins and peptides
Polypore	CA (calcium form), Mixed Mode	Microporous	-	-	Especially suited for separation of organic acids, as well as sugars
Polypore	H (hydrogen form), Mixed Mode	Microporous	-	-	Especially suited for separation of sugars, as well as organic acids
Reduced Activity	C18	80	12	Yes	Reversed-phase sorbent geared for fast separation of basic compounds/pharmaceuticals
Reduced Activity	C8	80	5	Yes	Same as above, but for slightly more polar compounds
Spheri-5	RP-18 (monofunctional C18)	80	11	Yes	Reversed-phase separation of smaller compounds
Spheri-5	ODS (polyfunctional C18)	80	14	Yes	Same as above, but with somewhat different selectivity
Spheri-5	RP-8 (monofunctional C8)	80	6	Yes	Reversed-phase separation of more basic smaller compounds
Spheri-5	Phenyl (C5)	80	6	Yes	Especially suited for hydrophobic interaction separation of biomolecules, where the activity of the compound must be preserved
Spheri-5	Amino	80	3	No	Normal-phase separation of smaller, relatively more polar compounds
Spheri-5	Cyano	80	4	No	Same as above, but with somewhat different selectivity
Spheri-5	Silica	80	-	-	Same as above, but with different selectivity
Validated	C18	100	18	Yes	Reversed-phase separations in which very little variation in both lot-to-lot and column-to-column variability can be tolerated
VeloSep	RP-18 (C18)	100	14	Yes	Reversed-phase column for high through-put and minimal solvent usage
VeloSep	RP-8 (C8)	100	7	Yes	Same as above, but for slightly more polar compounds

BROWNLEE™ ANALYTICAL CARTRIDGE COLUMNS FOR CONVENTIONAL AND NARROWBORE HPLC

Analytical cartridges from the Brownlee line are available in three lengths (30, 100 and 220 mm) and two internal diameters (4.6 and 2.1 mm). The MPLC cartridge system allows direct coupling of a cartridge to a guard without any dead-volume. Changing cartridges is easy with the finger-tight cartridge design, which does not require any wrench tightening of the holder or disconnecting of tubing from the LC system.

Features and Benefits

- **Quality** – manufactured under ISO-9001 certified quality control procedures
- **Quick** and easy cartridge change with the finger-tight design
- **Flexible** – same reusable holder for 2.1 and 4.6 mm cartridges
- **Economical** – less expensive than conventional columns

Brownlee CHOICE™

The CHOICE™ columns provide the speed and efficiency appropriate for LC/MS. Each column's separation requirements vary depending on the system, sample and mass spectrometer.

Brownlee PECO

PerkinElmer pioneered the development of Fast HPLC and introduced the popular 3 x 3 column. This column is capable of rapid analysis, as short as one to two minutes. The 83 mm long 3 x 8 column with > 10,000 plates can separate many complex mixtures in less than 10 minutes. Peco cartridges are available with MPLC® holders. Three cartridge lengths (33, 83 and 150 mm) are available in 4.6 mm i.d.

Brownlee Preparative

Preparative columns are 10 mm i.d. cartridges, packed with Aquapore® 20 µm, 300 Å sorbents. Save time with high-pressure preparative runs up to 3000 psi and achieve high performance with the 20 µm, 300 Å sorbents. Typical sample capacity of the 250 mm cartridge is 50 mg to 1 g of material; the typical flow rate is 4–10 mL/min.

Brownlee Columns and Holders

Brownlee VeloSep®

VeloSep columns are 3.2 mm i.d. cartridges packed with 3 µm reversed-phase support for high throughput analysis and reduced solvent consumption. VeloSep is packed with 3 µm C8 or C18 sorbents and available in 40 or 100 mm lengths.

Brownlee Validated

Brownlee Validated sorbent is derived from a neutral "Type B" silica with inherent low silanophobic activity. Each sorbent is tested to meet stringent specifications for the separation of basic, neutral and acidic test probes. A high-temperature bonding technique is coupled with an exhaustive end-capping procedure to ensure maximum coverage of the silica surface. A proprietary treatment step is used to further eliminate any trace residual metals in the silica that create active absorptive sites. This is a highly deactivated column which yields excellent peak shape for difficult base analytes, pharmaceuticals and small peptides.

NewGuard Columns

NewGuard cartridges are small guard cartridges (15 mm x 3.2 mm i.d.) packed with 5 or 7 µm sorbents. NewGuard columns prolong column life 2 to 5 times by eliminating particulates, contaminants and strongly bound sample components. They act as disposable, replaceable heads of your analytical columns. NewGuard columns are easily coupled to MPLC cartridges or conventional columns.

Brownlee MPLC/Peco Holders

MPLC cartridge system ensures leak-free operation up to 7,000 psi, with only finger-tightening. The high-pressure seal in each end assembly actually seals tighter as pressure increases. No wrenches are required and there is no need to disconnect any tubing to your LC system when changing a cartridge. MPLC cartridges can be directly coupled to another using a union.

Extensive Range of Phases and Column Lengths

Brownlee MPLC Cartridge Columns

Ion Exchange

Column	Description	30 mm x 4.6 mm i.d.* 2 per package	30 mm x 2.1 mm i.d.* 2 per package	100 mm x 4.6 mm i.d.** 1 per package
AX-300, Aquapore®	7 µm, 300 Å, Weak Anion	**07110073**	**07110074**	**07110075**
Polypore® CA	10 µm, Polymeric, Calcium Form	**07110091**		**07110093**
Polypore H	10 µm, Polymeric, Hydrogen Form	**07110085**		**07110087**

Polar Phase

Column	Description	30 mm x 4.6 mm i.d.* 2 per package	30 mm x 2.1 mm i.d.* 2 per package	100 mm x 4.6 mm i.d.** 1 per package
Cyano, Spheri-5	Cyanopropyl, 5 µm, 80 Å	**07110043**		**07110045**
Silica, Spheri-5	5 µm, 80 Å	**07110031**	**07110032**	**07110033**
Silica, Spheri-10	10 µm, 80 Å	**07110145**		

Reversed Phase

Column	Description	30 mm x 4.6 mm i.d.* 2 per package	30 mm x 2.1 mm i.d.* 2 per package	100 mm x 4.6 mm i.d.** 1 per package
Cyano, Spheri-5	Cyanopropyl, 5 µm, 80 Å	**07110043**		**07110045**
OD-300, Aquapore ODS	C-18, 7 µm, 300 Å	**07110235**	**07110234**	**07110232**
ODS, Spheri-5	C-18, Polyfunctional, 5 µm, 80 Å	**07110019**	**07110020**	**07110021**
Phenyl, Spheri-5	Phenyl, 5 µm, 80 Å	**07110025**		**07110027**
RP-8, Spheri-5	C-8, Monofunctional, 5 µm, 80 Å	**07110001**	**07110002**	**07110003**
RP-18, Spheri-5	C-18, Monofunctional, 5 µm, 80 Å	**07110013**	**07110014**	**07110015**
RP-300, Aquapore Octyl C-8	7 µm, 300 Å	**07110055**	**07110056**	**07110057**
Pecosphere C18	C-18, Monofunctional, Non-reduced, 3µm, 80A **(Pack of 5)**	**02580164**		**0258-0220**
Pecosphere 3CR	C-8, Base Deactivated, 3 µm **(Pack of 5)**	**02580191**		
Pecosphere 3CR	C-18, Base Deactivated, 3 µm **(Pack of 5)**	**02580195**		

Pecosphere C18 100 x 3.2 mm monofunctional, non-reduced, 3 µm, 80A column 0258-0221
*Requires Holder (07150013) **Requires Holder (07150014)

Normal Phase

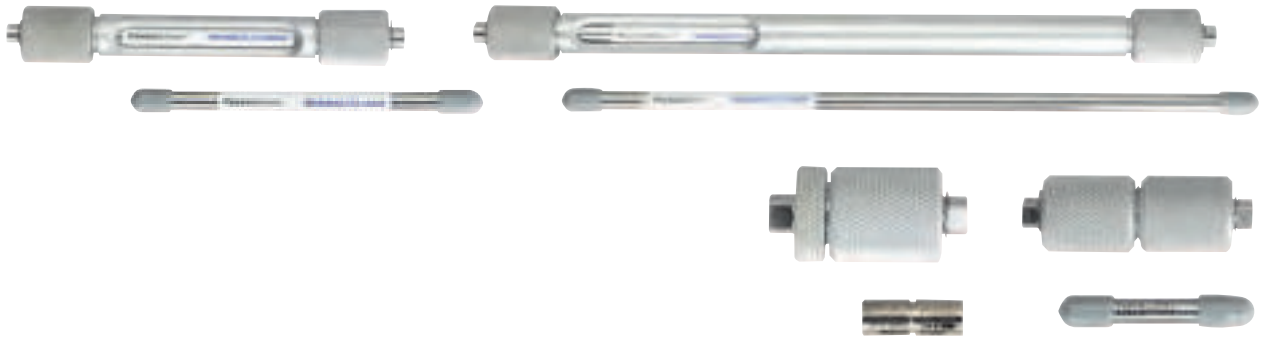
Description	33 x 4.6 mm i.d. 5 per package (requires holder 07150028)	83 x 4.6 mm i.d. 1 per package (requires holder 07150029)	150 x 4.6 mm i.d. 1 per package (requires holder 07150030)
Pecosphere 3 Silica		**02580167**	

Reversed Phase

Monofunctional; Pore Diameter 80 Å

Description	33 x 4.6 mm i.d. 5 per package (requires holder 07150028)	83 x 4.6 mm i.d. 1 per package (requires holder 07150029)	150 x 4.6 mm i.d. 1 per package (requires holder 07150030)
Pecosphere 3 C18, 3 µm	**02580164**	**02580166**	
Pecosphere 5 C18, 5 µm			**02580169**
Pecosphere 3CR C8, Base Deactivated, 3 µm	**02580191**	**02580192**	
Pecosphere 3CR C18, Base Deactivated, 3 µm	**02580195**	**02580194**	
Reduced Activity 5 C18, 5 µm			**N9303396**
Reduced Activity 5 C8, 5 µm			**02580168**
Peco HCODS C18, Polyfunctional, 5 µm, 300 Å			**02580213**

Description	100 x 2.1 mm i.d. 1 per package (requires holder 02580225)	100 x 3.2 mm i.d. 1 per package (requires holder 02580225)
Pecosphere 3CR C18, Base Deactivated, 3 µm **(Pack of 5)**	**02580220**	**02580221**



Scavenger Columns

Column	Description	33 mm x 4.6 mm i.d.[4] 5 per package
Silica Scavenger	10 µm	**02580203**
C18 Scavenger	Monofunctional, 10 µm, 80A	**02580202**

Ion Exchange

Column	Description	100 mm x 2.1 mm i.d.[2] 1 per package	220 mm x 4.6 mm i.d.[5] 1 per package	220 mm x 2.1 mm i.d.[5] 1 per package
AX-300, Aquapore	7 µm, 300 Å, Weak Anion		**07110077**	
Polypore® CA	10 µm, Polymeric, Calcium Form		**07110095**	
Polypore H	10 µm, Polymeric, Hydrogen Form		**07110089**	

Polar Phase

Column	Description	100 mm x 2.1 mm i.d.[2] 1 per package	220 mm x 4.6 mm i.d.[5] 1 per package	220 mm x 2.1 mm i.d.[5] 1 per package
Amino, Spheri-5	Aminopropyl, 5 µm, 80 Å		**07110041**	
Cyano, Spheri-5	Cyanopropyl, 5 µm, 80 Å		**07110047**	
Silica, Spheri-5	5 µm, 80 Å		**07110035**	

Reversed Phase

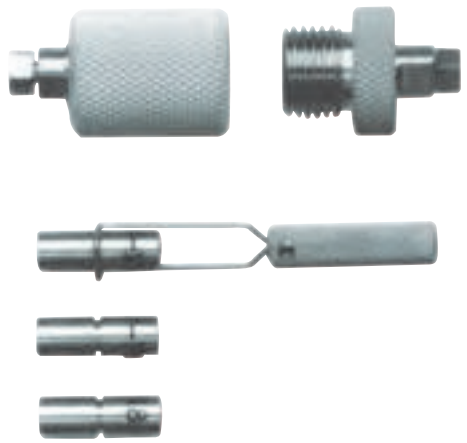
Column	Description	100 mm x 2.1 mm i.d.[2] 1 per package	220 mm x 4.6 mm i.d.[5] 1 per package	220 mm x 2.1 mm i.d.[5] 1 per package
BU-300, Aquapore Butyl C-4	7 µm, 300 Å	**07110064**		
Cyano, Spheri-5	Cyanopropyl, 5 µm, 80 Å		**07110047**	
OD-300, Aquapore ODS	C-18, 7 µm, 300 Å	**07110233**	**07110231**	**07110236**
ODS, Spheri-5	C-18, Polyfunctional, 5 µm, 80 Å	**07110022**	**07110023**	**07110024**
Phenyl, Spheri-5	Phenyl, 5 µm, 80 Å		**07110029**	
RP-8, Spheri-5	C-8, Monofunctional, 5 µm, 80 Å	**07110004**	**07110005**	**07110006**
Pecosphere 3CR	C-18, Base Deactivated, 3 µm			
RP-18, Spheri-5	C-18, Monofunctional, 5 µm, 80 Å	**07110016**	**07110017**	**07110018**
Pecosphere 3CR	C-8, Base Deactivated, 3 µm			
RP-300, Aquapore Octyl C-8	7 µm, 300 Å	**07110058**	**07110059**	**07110060**
Pecosphere C18[6]	C-18, Monofunctional, Nonreduced, 3 µm, 80 Å	**0258-0220**		

[2] Requires Holder (07150014) [4] Requires Holder (07150028) [5] Requires Holder (07150015) [6] Requires Holder (02580225)

NewGuard cartridges directly coupled to a 220 mm MPLC cartridge and connected externally to a 250 mm conventional column.

NewGuard Columns

NewGuard cartridges are small guard cartridges (15 mm x 3.2 mm i.d.) packed with 5 or 7 µm sorbents. NewGuard cartridges prolong column life by eliminating particulates, contaminant's, and strongly bound sample components. They act as replaceable, disposable heads of your analytical columns. There is negligible loss of efficiency and little effect on retention or resolution. NewGuards are available in a convenient 3-pack and can be coupled directly to any MPLC cartridge with a union (07150018).



View of the NewGuard holder and a NewGuard 3-pack.

Features and Benefits

- Prolong column life by 2 to 5 times
- Protect your column from particulates and strongly bound sample components
- Optimized dimensions to prevent loss of resolution
- Easy coupling to MPLC cartridges or conventional columns
- Finger-tight seal to 7,000 psi using NewGuard holders
- Can be used for sample preconcentration (connected to sample injection loop)

15 mm cartridge*, 3.2 mm i.d., 3 per pkg.

Description	Size	Shape	Part No.
Amino, Aquapore® Amino	7 µm	Spherical	**07110098**
Anion, Aquapore Anion	7 µm	Spherical	**07110102**
Cyano, Aquapore Cyano	7 µm	Spherical	**07110100**
Diol, Aquapore Diol	7 µm	Spherical	**07110105**
Phenyl, Aquapore Phenyl	7 µm	Spherical	**07110096**
RP-2, Aquapore Dimethyl	7 µm	Spherical	**07110086**
RP-4, Aquapore Butyl	7 µm	Spherical	**07110088**
RP-8, Aquapore Octyl	7 µm	Spherical	**07110090**
RP-18, Aquapore ODS	7 µm	Spherical	**07110092**
Silica, Aquapore Silica	7 µm	Spherical	**07110106**
Validated®, C18	5 µm	Spherical	**00402237**

* Requires holder (07150001)

Note: Actual bed length of NewGuard is about 13 mm

Standards Solutions

Description	Part No.
Test Mix	
LC Gradient Test Mix	**N9334010**
Universal Test Mix for Reversed-phase (5 mL/pkg)	**00890893**
Standards	
HPLC SV Calibration Mix #5/610 PAH	**00891542**
HPLC 610 Calibration Mix A	**00891543**
HPLC 610 Calibration Mix B	**00891544**

NewGuard Accessories

Replacement Seals for MPLC and Prep-10 Holders

Description	Part No.
Prep-10 Inlet Seal	
One each (Prep-10 Seal Replacement Kit Tools Required)	**07150012**
Prep-10 Outlet Seal	
One each (Prep-10 Seal Replacement Kit Tools Required)	**07150026**
Seals for MPLC Holders	
Two 7,000 psi seals (Seal Replacement Kit Tools Required)	**07150024**
Seal Replacement Kit for MPLC Holders	
Tools and Two 7,000 psi Seals	**07150023**

Finger-Tight Holders

MPLC/Peco™ Holders

The patented MPLC cartridge system ensures leak-free operation up to 7000 psi, with only finger-tightening. The high-pressure seal in each end assembly actually seals tighter as pressure increases. No wrenches are required, and there is no need to disconnect any tubing to your LC system when changing a cartridge. Each MPLC cartridge can be directly coupled to another using a union.

Name	Description	Part No.
Universal Holder Kit	Includes 100 and 220 mm holder bodies, 2 end assemblies, 1 union and 1 NewGuard end assembly.	**07150025**
NewGuard® Holder	Holds a single NewGuard cartridge or a single 20 mm CHOICE™ cartridge.	**07150001**
30 mm Holder	Holds a single MPLC and CHOICE 30 mm cartridge. (Do not use with Pecosphere column)	**07150013**
33 mm Pecosphere Holder	Holds 33 mm Fast LC Peco cartridge only.	**07150028**
50 mm Holder	Holds a single 50 mm CHOICE cartridge only.	**N2580030**
83 mm Peco Holder	Holds 83 mm Fast LC Peco cartridge only.	**07150029**
100 mm Holder	Holds a single MPLC 100 mm cartridge.	**07150014**
100 mm Holder	Holds Pecosphere 10 cm cartridge	**02580225**
150 mm Holder	Holds a single MPLC 150 mm cartridge.	**07150030**
220 mm Holder	Holds a single MPLC 220 mm cartridge.	**07150015**
250 mm Holder	Holds a single MPLC 250 mm cartridge.	**07150031**
100 mm NewGuard System Holder	Holder for a NewGuard and a 100 mm coupled cartridge.	**07150016**
220 mm NewGuard System Holder	Holder for a NewGuard and a 220 mm coupled cartridge.	**07150017**
130 mm MPLC System Holder	Holder for a 30 and 100 mm coupled cartridge.	**07150032**
Union	For direct coupling of 2 cartridge holders. (Two holder bodies and 2 end assemblies also required.)	**07150018**
NewGuard End Assembly	Upgrades a 30 mm holder to a NewGuard holder.	**07150002**
End Assembly	Holder component.	**07150019**
30 mm Holder Body	Holder component.	**07150020**
100 mm Holder Body	Holder component.	**07150021**
20 mm Holder Body	Holder component.	**07150022**

Prep-10 Cartridge Holders

Name	Description	Part No.
100 mm Prep-10 Holder	Holds a single 100 mm Prep-10 cartridge.	**07150005**
250 mm Prep-10 Holder	Holds a single 250 mm Prep-10 cartridge.	**07150006**

Stainless Steel Sample Loops

For Flexar FX UHPLC Autosampler (up to 18,000 psi operation)

Stainless Steel loops required for use with FX-10 or FX-15 systems operating above 6,200 psi.

High Pressure Stainless Steel Sample Loops

Description	Size	Part No.
Sample Loop, SS	2 µL	**N2936071**
Sample Loop, SS	5 µL	**N2936056**
Sample Loop, SS	10 µL	**N2936057**
Sample Loop, SS	20 µL	**N2936058**
Sample Loop, SS	50 µL	**N2936059**
Sample Loop, SS	100 µL	**N2936060**
Sample Loop, SS	200 µL	**N2936061**
Sample Loop, SS	500 µL	**N2936062**
Sample Loop, SS	1 mL	**N2936063**
Sample Loop, SS	2 mL	**N2936064**
Sample Loop, SS	5 mL	**N2936065**

Stainless Steel Sample Loops

	Model 7125/7010	Model 7725	Model 8125
Size	Part No.	Part No.	Part No.
10 µL	**09904938**	**N9306024**	
50 µL	**09904940**	**N9306026**	
100 µL	**09904942**	**N9306027**	**41000013**
200 µL	**09904818**	**N9306028**	**09904818**
5 mL			**N9306032**

PEEK Sample Loops For Series 200/225 and Flexar LC Autosamplers (up to 6,200 psi operation)

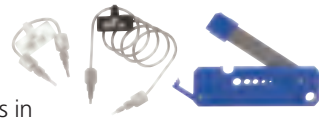
These loops are compatible with all standard Flexar autosamplers as well as Series 225 autosamplers. PEEK loops cannot be used above 6,200 psi operation therefore are NOT compatible eith standard Flexar autosamplers. Stainless steel loops required for use wirh FX-10 or FX-15 UHPLC systems operating above 6,200 psi.

Description	Size	Part No.
PEEK Sample Loop	2 µL	**N2936072**
PEEK Sample Loop	5 µL	**N2936073**
PEEK Sample Loop	10 µL	**N2936074**
PEEK Sample Loop	20 µL	**N2936075**
PEEK Sample Loop	50 µL	**N2936076**
PEEK Sample Loop	100 µL	**N2936077**
PEEK Sample Loop	250 µL	**N2936078**
PEEK Sample Loop	500 µL	**N2936079**
PEEK Sample Loop	1 mL	**N2936080**
PEEK Sample Loop	2 mL	**N2936081**
PEEK Sample Loop	5 mL	**N2936082**

Sample loops are made from PEEK tubing and fittings. PEEK (poly-ether-ether-ketone) is a mechanically-strong, chemically-inert polymer, ideal for HPLC applications where metal surfaces may interact with the mobile phase or sample component. Each sample loop is supplied with two PEEK hex-head nuts and ferrules. These fittings grip the tubing in two locations for a more reliable connection.

Description	Size	Part No.
PEEK Sample Loop	20 µL	**N9306035**
PEEK Sample Loop	50 µL	**N9306036**
PEEK Sample Loop	200 µL	**N9306038**
Internal Loop (PEEK and Ceramic)	2 µL	**N9306022**

Tubing Accessories



Clean-Cut™ tubing tool is designed to cut Teflon®, Tefzel® and polymers in general but, in particular, PEEK tubing. A unique safety locking mechanism secures the blade when not in use.

Description	Part No.
Clean-Cut Tubing Cutter	**ED020015**
Clean-Cut Tubing Replacement Blade	**ED020016**
Cable/Tubing clip (U-Shaped)	**NX598006**
Stick-on Tubing Organizer (Gray Plastic)	**NX598006**

PEEK Tubing

PEEK tubing has the strength required to withstand continuous use at HPLC pressure without swelling or bursting.

Use PEEK with virtually any organic or inorganic liquid. PEEK tubing is not affected by halide salts, high-strength buffers or other aggressive mobile phases that degrade stainless steel.

Description	Length	Part No.
1/16 in O.D. x 0.007 in I.D.	5 ft	**N9302678**
1/16 in O.D. x 0.010 in I.D.	5 ft	**N9302650**
1/16 in O.D. x 0.004 in I.D. (Black)	50 cm	**N2916200**
1/16 in O.D. x 0.005 in I.D. (Red)	50 cm	**N2916059**
Connector Tubing, Flexar/FX Mixer to Injector, SS		**N2916211**
Connector Tubing, Flexar ISO/Binary/ Quaternary Pump to Autosampler, SS		**N2916210**

Stainless Steel Tubing

Features and Benefits

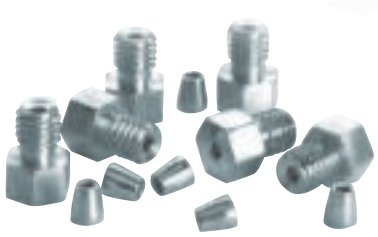
- Pre-cut and mirror-polished in 316 stainless steel

Description	Length	Part No.
1/16 in O.D. x 0.015 in I.D.	6 ft	**00873036**
1/16 in O.D. x 0.007 in I.D.	3 ft	**02540838**
1/16 in O.D. x 0.005 I.D.	2 ft	**02507060**

High-performance Fingertight® fittings for the most demanding applications

This PEEK Fingertight® fitting is the toughest with regard to chemical resistance and pressure. This high-performance Fingertight® fitting is recommended for the most demanding applications and will resist pressures up to 6,000 psi (400 bar). Made from a single piece of PEEK, the size permits tightening without tools.

Description	Part No.
PEEK One-Piece Fingertight® Fitting	**ED020005**



Fittings, Nuts and Ferrules

Stainless steel nuts are available in both Parker-Hannifin and Rheodyne™ formats. The nuts are used to connect 1/16 inch o.d. stainless steel tubing and feature a 10-32 thread size. PerkinElmer also offers select SSI fittings for 1/16 inch o.d. tubing in 1/4-28 thread size.

Stainless Steel Fittings

Description	Part No.
Kel-F Reverse Ferrule, 1/8 inch*	**09903771**
Kel-F Ferrule, 1/16 inch*	**09920382**
Tefzel Nut, 1/16 inch*	**09920381**
Parker-Hannifin Ferrule, 1/16 inch	**00873032**
Parker-Hannifin Nut, 1/16 inch	**09903980**
Parker-Hannifin Nut & Ferrule Kit, 1/16 inch Includes: 6 nuts and 6 ferrules	**00890945**
Parker-Hannifin Zero-Dead-Volume Union with nuts and ferrules	**09903289**
Parker-Hannifin Medium-Stem SS Nut	**N2916202**
Rheodyne™ Ferrule, 1/16 inch	**09904947**
Rheodyne™ Nut, 1/16 inch long body	**09904974**
Rheodyne™ Nut, 1/16 inch short body	**09904956**
Rheodyne™ Nut and Ferrule Kit, 1/16 inch Includes: 6 ferrules, 3 short nuts and 3 long nuts	**02540274**
Tefzel Nut (for Reverse Ferrule), 1/8 inch*	**N2601189**
Tefzel Nut, 1/16 inch*	**09920381**
Valco Ferrule	**09903891**
OptiTech Reusable Nut/Ferrule for UHPLC (fingertight to 15K psi)	**N9306301**
OptiTechFerrule replacements for UHPLC (10 pack)	**N9306300**
UHPLC 1/16 inch Reusable Fitting	**N9307800**

* The Tefzel and Kel-F fittings above are only for low pressure use (under 400 psi).

ONE-PIECE, EASY-TO-USE

Fittings Kits

Recommended for users of a PerkinElmer Biocompatible LC system. Contains nuts, ferrules and unions.

Description	Part No.
Biocompatible Column Fittings for LC	**N9301001**

Fittings Kit for LC

The kit contains Rheodyne™ and SSI nuts and ferrules as well as Fingertight® II nuts and ferrules for toolless installation. Zero-dead-volume unions are also included. In addition you receive varying lengths of stainless steel tubing in 0.007 and 0.010 inch i.d.s, as well as 0.30 inch i.d Tefzel® tubing.

Description	Part No.
All-in-one Fittings Kit	**N9301002**

Operation Kit

Recommended for purchasers of their first LC. Includes tubing, union, fittings, syringe, basic LC book and test mix.

Description	Part No.
Operation Kit	**00890873**

ENHANCE PUMP PERFORMANCE

Vacuum Degassing Kits

Using a solvent degassing system will extend the performance of your pump. PerkinElmer offers both vacuum degassing systems that can handle all your degassing requirements.

On-Line Vacuum Degasser Kit

This is a low-volume, high efficiency, on-line module for the removal of dissolved gasses from HPLC solvents. The vacuum degasser is available in 3 and 5 channel models to support isocratic, binary and quaternary pumps as well as degassing of autosampler flush solvent.

Description	Part No.
3-channel Vacuum Degassing Package. Includes: a Vacuum Degasser, one 1 L Bottle with Cap, one 2 L Bottle with Cap, one Organizer Tray and Accessory	**N2600571**
5-channel Vacuum Degassing Package. Includes: a Vacuum Degasser, two 1 L Bottle with Caps, two 2 L Bottles with Caps, Solvent Tray and Organizer	**N2600570**
Binary Bottle Cap Kit. Includes: two Caps, Tubing, Fittings and Labels required for two Solvent Bottles	**N2600522**
Quatenary Bottle Cap Kit. Includes: four Caps, Tubing, Fittings and Labels required for four Solvent Bottles	**N2600523**

Liquid Chromatography Laboratory Bottle Kits

Contents	Part No.
1x5 Liter Bottle with Cap and Teflon Insert, 2 Meters PTFE ⅛" Tubing and 1x10 µm SS Solvent Frit	**N2601610**
1x2 Liter Bottle with Cap and Teflon Insert 1 Meter PTFE ⅛" Tubing and 1x10 µm SS Solvent Frit	**N2601611**
1x1 Liter Bottle with Cap and Teflon Insert 1 Meter PTFE ⅛" Tubing and 1x10 µm SS Solvent Frit	**N2601612**
1x0.5 Liter Bottle with Cap and Teflon Insert 1 Meter PTFE 1/16" Tubing and 1x40 µm SS Solvent Frit	**N2601613**
1 Cap with Teflon Insert 1 Meter PTFE ⅛" Tubing and 1x10 µm SS Solvent Frit	**N2601614**
1 Cap with Teflon Insert 1 Meter PTFE 1/16" Tubing and 1x40 µm SS Solvent Frit	**N2601615**
1x0.5 Liter Bottle with Cap and Dual Teflon Insert 2 pcs of 2 Meter PTFE ⅛" Tubing (Piston Wash Function)	**N2601616**
1 Cap with Dual Teflon Insert 2 pcs of 2 Meter PTFE ⅛" Tubing and 1x10 µm SS Solvent Frit (Piston Wash Function)	**N2601617**

Check Valves

HPLC check valves allow solvent to flow in only the desired direction. Check valves are easy to install with the torque wrench kit. For all PerkinElmer pumps an intermediate check valve is required. The input check valve, which is identical, should be ordered. The check valves of the biocompatible pumps differ from those of the stainless steel pumps in that all portions that contact fluid are composed of titanium.

	Inlet/Intermediate Check Valve	Outlet Check Valve
Type	Part No.	Part No.
Standard Stainless Steel	**02540177**	**02540197**
Micropump	**02540177**	**02540197**
Biocompatible Titanium	**N2600226**	**N2600192**
FX-15 Check Valves	**N2911220**	**N2911220**

Maintenance Kits and Tools

Description	Part No.
Biocompatible Piston Seal Replacement Kit Includes: Four Seals, Backup Rings, and O-rings	**N2910385**
Check Valve Torque Wrench	**02540871**
Diaphragm for Pulse Compensator	**N2601316**
FX-15 UHPLC Pump Accessories Replacement 0.5 µm Filter Frits for FX-15 (4-pack)	**N2911224**
High pressure FX-15 Piston Seal Kit	**N2911221**
Standard Piston Seal Replacement Kit for Series 200 and Flexar Pump Includes: Four Seals, Backup Rings, and O-rings	**N2910383**
Insertion Tool	**N2601503**
Micropump Piston Seal Replacement Kit for Series 275 and FX-10 pump	**N2910384**
Piston Wash Bottle Kit for FX-15	**N2601616**
Pulse Compensator Repair Kit Includes: Diaphragm, Elastomer Plug, and Seal	**N2600313**
Seal Removal Tool	**N2601295**
Series 200 Bio LC Pump Maintenance Kit Includes: Fuses, Seals, O-rings, and Seal Tools	**N2910346**
Series 200 Pump Maintenance Kit Includes: Fuses, Seals, O-rings, and Seal Tools	**N2910345**

Replacement Vacuum Degasser Bottles

Description	Part No.
1 L Glass Bottle	**N2600497**
2 L Glass Bottle	**N2600498**

Solvent Sparger and Solvent Filters

Solvent filters remove unwanted particulate matter from the LC instrument. Spargers connect directly to the solvent delivery line and are easily removed for cleaning. The scavenger column is ideal for eliminating particulate material from solvents.

Solvent Filters

Solvent Spargers, Filters and Scavengers

Description	Size	Part No.
Solvent Reservoir Sparger		
Stainless Steel	10 µm	**09903610**
Titanium	10 µm	**N2600070**
Stainless Steel	40 µm	**09903615**
Titanium	40 µm	**N2600089**
Solvent Filters/Scavengers		
In-Line Solvent Filter System		**09903606**
In-Line Solvent Filter Replacement Kit		**02540311**
In-Line Solvent Filter System, Titanium		**N2600259**
Replacement 2 µm Titanium Filter Element		**N2601477**
Replacement Seal for In-Line Solvent Filter		**N2601262**
3 cm Scavenger Cartridge Holder		**02580178**
Spheri-5 C18 10 µm Scavenger Column (5 pack)		**02580202**
LC System Accessories		
Solvent waste cup		**N2916019**
Drain Cup		**N2916085**
90° Elbow Adapter, ¼" ID HDPP		**09220102**
Tubing Clip (U-shaped, Polypropylene)		**NX598006**
Polypro Elbow Barbs		**09220102**
Large ID (11 mm) Silicone Tubing (5 ft)		**N2916016**
Manual Injector Bracket (Magnetic Clip-on)		**N2931275**

Static Mixers

Static mixers are used to facilitate complete mobile phase blending, resulting in improved retention performance. The mixer will most typically be used where high-pressure blending of two pump outputs is required. Mixers incorporate a highly efficient crossflow shearing mechanism which produces vortex sheer mixing over a wide flow range.

Mixers

Mixing Head

UHPLC Static Mixers (up to 18,000 psi)

Description	Size	Part No.
In-Line High Pressure Mixer Assembly, SS	50 µL	**N2911200**
In-Line High Pressure Mixer Assembly, SS	150 µL	**N2911201**
In-Line High Pressure Mixer Assembly, SS	250 µL	**N2911202**
In-Line High Pressure Mixer Assembly, SS	350 µL	**N2911205**
In-Line High Pressure Mixer Assembly, SS	500 µL	**N2911203**
Binary T-Mixer, SS	10 µL	**N2911170**
Binary High Pressure T-Mixer, SS	50 uL	**N2911212**
HP Binary High Pressure T-Mixing, SS	150 µL	**N2911206**
Binary High Pressure T-Mixer, SS	350 uL	**N2911210**
Binary High Pressure T-Mixer, SS	500 uL	**N2911211**
T-connector, SS		**N2911127**

Analytical Static Mixers (up to 6,200 psi)

Description	Size	Part No.
Binary T Mixer	10 µL	**N2911170**
Binary T Mixer	25 µL	**N2911171**
In-Line Mixer Assembly	150 µL	**N2911173**
In-Line Mixer Assembly	500 µL	**N2911172**
Binary T Mixer Cartridge	10 µL	**N2911174**
Binary T Mixer Cartridge	25 µL	**N2911175**
Binary T Mixer Cartridge	50 µL	**N2911176**
Binary T Mixer Cartridge	150 µL	**N2911177**
Binary T Mixer Cartridge	250 µL	**N2911178**

Dynamic Mixer

Used to facilitate complete mobile phase blending, resulting in improved retention performance. The mixer will most typically be used as part of a Micro pump package — where high-pressure blending of 2 pump outputs is required. Three different volume mixing heads (75, 200 and 400 µL) are available.

Kit includes: Mixer Accessory, Stainless Steel "Tee" Fitting (N2911127), U.S. style AC Line Cord and 0.1 A Type T Fuse.

Description	Part No.
Dynamic Mixer Accessory (100–240 V)	**N2910520**

Mixing Heads

Size	Part No.
75 µL	**N2910521**
200 µL	**N2910522**
400 µL	**N2910523**

NEW

Flom Analytical Injection Valve

The Flom Analytical Injection Valve is a very reliable manual HPLC injection valve. It comes with a built in "Inject" contact closure connection output. A PEEK rotor seal is provided for excellent solvent/sample resistance and the fluid path is designed for minimal dispersion. This valve is available in either stainless steel or PEEK, depending on the application or need.

Description	Product No.
Flom Injection Valve Stainless Steel	**N9306073**
Flom Injection Valve PEEK	**N9306072**

Injector Valve Rotor Seals

For both Series 200 Autosampler and manual injectors.

For both the Rheodyne and Flom valves, rotor seals should be periodically replaced every 6 months to a year and are available in PEEK. For the Rheodyne valve, they are also available in Vespel. PEEK is more inert towards amines and other basic biomolecules/ pharmaceuticals, exhibiting less sample carryover. However, Vespel is somewhat more resilient than PEEK, providing somewhat better wear life.

Description	Product No.
Flom Rotor Seal PEEK	**N9306068**
Rheodyne 7725 Vespel Rotor Seal	**09904802**
Rheodyne 8125 Vespel Rotor Seal	**10070900**
Rheodyne 7725/9725 PEEK Rotor Seal	**N9306044**

Rheodyne™ 9725 PEEK Bio Injection Valve

Model 9725 is inert and well-suited to the chromatography of biological molecules, including applications with aggressive mobile phases. This valve is useful in all applications in which metal contact with the mobile phase and or sample should be avoided. This valve uses PEEK vent lines and a Teflon® rotor seal and can be operated in a pH range from 0 – 14.

Description	Product No.
9725 Injection Valve for Series 200 Autosampler	**N9306020**

Rheodyne™ 8125 Low-Dispersion Stainless Steel Injection Valve

Ideal for use in an LC/MS system, the model 8125 is designed for 1 and 2 mm microbore columns and can also be used with conventional analytical (3 to 5 mm) columns. Small flow passages produce low dispersion, maintaining the high mass sensitivity inherent in micro columns.

Description	Product No.
8125 Low-Dispersion Stainless Steel Injection Valve	**N9306021**

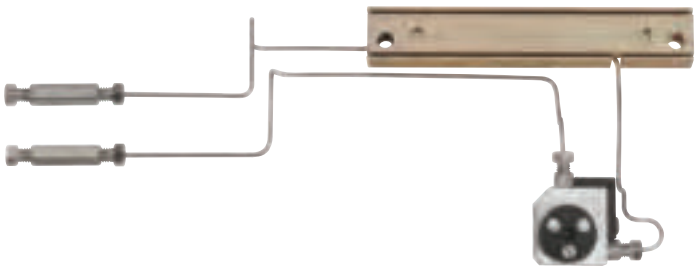
Rheodyne™ 7725 Analytical Injection Valve

Inject from 1 µL to 5 mL with high accuracy and precision, with the Rheodyne™ 7725 and 7725i valves.

Rheodyne™ 7725 and 7725i valves are versatile injectors and can use both partial-filling and complete-filling methods for loading the sample loop. Wide port angles of the 7725/7725i valve provide improved access to fittings. Sample loop with a 2 µL internal capacity is also available. In a clean system, the 7725/7725i typically can make more than 30,000 injections before requiring replacement of the rotor seal.

Description	Product No.
7725 Injection Valve for Series 200 Autosampler	**N9306019**
7725i Injection Valve with Internal Switch	**N9306017**

INTERCHANGEABLE FOR YOUR SAMPLE



Bio Conversion Kits

There are two kits available; one that contains all of the parts necessary to convert the Series 200 pump and Series 200 autosampler for Bio applications. The other contains all of the parts necessary to convert only the Series 200 Pump for Bio applications.

Description	Part No.
S200 Pump and S200 Autosampler Conversion Kit	**N2910035**
S200 Pump Conversion Kit	**N2910036**

Pump Seal Kits

Description	Part No.
High Pressure Piston Seal Replacement Kit Includes: Seals (4), Backup Rings and O-Rings	**N2910383**
Micropump Piston Seal Replacement Kit Includes: Seals and O-Rings	**N2910384**
Series 200 Pump Maintenance Kit Includes: Fuses, Seals, O-Rings and Seal Tools	**N2910345**

Detector Backpressure Regulator

The detector backpressure regulator is a device that is attached to the outlet of the detector to prevent outgassing in the flowcell, eliminating variations to the detector baseline.

Description	Material	Part No.
40 psi inline backpressure regulator		**N2925090**
2 – 5K psi variable backpressure regulator		**N2925091**
Backpressure Regulator Adjustable from 15 – 59 psi	Stainless Steel	**09907126**

Flexar UV/Vis, Series 200/785A UV/Vis, Flexar PDA and Series 200 EP

These flowcells provide the highest detection limits possible for your sample. The 6 mm pathlength flowcell has been optimized for lower-dispersion LC analysis and is the perfect choice when using narrowbore, 2.1 mm or microbore, 1 mm columns (see Figure 1). The 3 mm pathlength is the choice for semiprep LC to avoid detector saturation at high-solute concentrations.

UV/Vis, PDA, FL and LC-135/235 FLOWCELLS

Description	Size	Part No.
Flowcells for Flexar FX-UV/Vis UHPLC Detectors		
Flowcell	6 mm x 2.4 µL	**N2925090**
Flowcell Kit (includes flowcell & detector head plate w/ gasket)	6 mm x 2.4 µL	**N2920070**
Flowcells for Flexar FX-UV/Vis UHPLC Detectors		
Flowcell Kit (includes flowcell w/ heat exchanger and zdv unions)	10 mm x 15 µL	**N2920070**
Flowcell	10 mm x 15 µL	**N2920124**
Flowcell Assembly (w/ zdv unions)	6 mm x 2.4 µL	**29000544**
Prep Flowcell Assembly (w/ zdv unions)	3 mm x 1.7 µL	**29000545**
Flowcells for 785A UV/Vis Detectors		
Flowcell	8 mm x 12 µL	**29000542**
Flowcell Assembly (w/ heat exchanger and zdv unions)	8 mm x 12 µL	**N2920117**
Flowcells for Flexar FX-PDA UHPLC and Series 275 PDA Detectors		
Flowcell (dual-lensed)	6 mm x 2.4 µL	**N2920128**
Flowcells for Flexar and Series 200EP PDA Detectors		
Flowcell	10 mm x 15 µL	**N2920126**
Flowcell Assembly	10 mm x 15 µL	**N2920160**
Flowcells for Series 200 PDA Detectors		
Flowcell	10 mm x 12 µL	**N2922107**
Flowcell	4.5 mm x 5 µL	**N2922030**
FL 3 µL Flowcell w/ Assembly		**N2922211**
Flowcells for LC-135/235 PDA Detectors		
Flowcell Assembly (w/ heat exchanger)	10 mm x 8 µL	**N2350211**
Flowcell	10 mm x 8 µL	**N2350162**

FOR OUTSTANDING PERFORMANCE

UV/VIS Deuterium Detector Lamp

Our extensive quality control and inspection process demands the very best quality sources. Choosing a PerkinElmer deuterium, tungsten or xenon source provides outstanding ultraviolet and true visible performance.

- Exceptional performance anywhere in the detector's 190 – 700 nm wavelength range
- Lamp changes are quick and easy due to a unique self-aligning lamp mount

UV/VIS Detector Lamps

Components	Part No.
Flexar Series/Series 200/785A UV/VIS Detector Lamps	
Deuterium Lamp	**N2920149**
Tungsten Lamp	**N2920146**
LC-295 UV/VIS Detector Lamps	
Deuterium Lamp	**02712266**

Refractive Index Detector Lamps

The Flexar Series/Series 200/200s Refractive Index, with its deflection-type design, allows sensitive detection of these compounds with low noise and drift characteristics.

Series 200/200a

Components	Part No.
Tungsten Lamps	**02712273**

Series 200/200 EP Photo Diode Array Detector Lamp

Photo Diode Array Detector Lamps

The Flexar Series/Series 200/200 EP Photo Diode Array Detector provides true UV/VIS detection and high resolution spectral data. The excellent signal-to-noise characteristics make it ideally suited for low-volume or low concentration samples.

Components	Part No.
Flexar/Series 200 EP	
Deuterium Lamp	**N2925030**
Tungsten Lamp	**N2922011**
Series 200	
Deuterium Lamp (Phase 2)	**N2922046**
Tungsten Lamp	**N2922011**
LC-135C/235	
Detector Lamp	**N2351285**

Fluorescence Detector Lamps

The major benefit afforded by fluorescence detection is the inherent high sensitivity of the technique coupled with outstanding specificity. The Series 200a Fluorescence Detector provides signal to noise ratio of >700:1 from trace analysis using a 150 W xenon source.

Components	Part No.
Flexar/Series 200/200a	
Xenon Lamp	**N2922082**
Flexar/Series 200/200a	
Xenon Lamp	**L2251157**
Festoon Lamp	**04969486**

Nitrogen Generators

PerkinElmer offers customers a new line of nitrogen generators to meet the growing need for cost effective and pure nitrogen.

Membrane Nitrogen Generators are designed to supply single or multiple LC/MS instruments with dry nitrogen at purities of 98% to 99.5%.

The generator can also be used for solvent evaporation as well as supplying dry nitrogen to analytical instruments.

Features and Benefits

- LC/MS grade purity enhances instrument performance
- Phthalate-free
- Recommended, certified, tested, and used by all major LC/MS instrument manufacturers
- Return on investment in 6 months to 2 years
- Minimal maintenance required

Applications

- LC/MS
- Solvent Evaporation
- Analytical instruments requiring nitrogen
- Thermal Analyzers

Low Flow NITROFLOW Lab

Features and Benefits

- Complete "Plug and Play" system recommended by all major LC/MS manufacturers
- 8,000 hours compressor warranty or two years
- Special design ensures quiet operation
- Dual oil-less air compressors

Components	Part No.
120 V	**N9306213**
230 V	**N9306214**

Product Specification	
Purity:	94.0 – 99.5%
Phthalate-free	
Hydrocarbon-free	
Flow Rates	10 – 50 lpm
Delivery pressure	8 bar
Ambient temperature	10 °C – 35 °C
Power consumption	1400 Watts
Noise level	<58 dB (A)
Electrical requirements	120 V / 60 Hz, 20 Amp Nema 5
Lab capacity at nominal conditions:	
Ambient temperature:	20 °C/ 68 °F
Ambient pressure:	1013 mbar(a).
Dimensions (net):	90 cm W x 31 cm D x 70 cm H
Weight (shipping)	127.4 kg, 280 lbs

Description	Part No.
N2-22 Mid Flow Nitrogen Generator without Air Compressor	**N9306210**

Product Specification	
Purity:	95.0 – 99.5%
Atmospheric Dewpoint	-58 °F (-50 °C)
Particles >0.01 µm:	None
Suspended liquids:	None
Min./Max. operating pressure:	60/145 psig (4.0/10 barg)
Ambient operating temperature range:	60 °F – 95 °F (15 °C – 35 °C)
Inlet air temperature range:	60 °F – 95 °F (15 °C – 35 °C)
Maximum recommended inlet air temperature	110 °F (43 °C)
Electrical requirements:	None
Dimensions (net):	45 cm W x 41 cm D x 130 cm H
Weight (shipping):	36 kg, 80 lbs

Flow Rates*		
Inlet psi	Output lpm	Purity %
100	13	99.5
125	16	99.5
100	20	99.0
125	25	99.0
100	30	98.0
125	38	98.0

Description	Part No.
N2-35 Mid Flow Nitrogen Generator without Air Compressor	**N9306211**

Product Specification	
Purity:	95.0 – 99.5%
Atmospheric Dewpoint	-58 °F (-50 °C)
Particles >0.01 µm:	None
Suspended liquids:	None
Min./Max. operating pressure:	60/145 psig (4.0/10 barg)
Ambient operating temperature range:	60 °F – 95 °F (15 °C – 35 °C)
Inlet air temperature range:	60 °F – 95 °F (15 °C – 35 °C)
Maximum recommended inlet air temperature	110 °F (43 °C)
Electrical requirements:	None
Dimensions (net):	45 cm W x 41 cm D x 130 cm H
Weight (shipping):	41 kg, 90 lbs

Flow Rates*		
Inlet psi	Output lpm	Purity %
100	20	99.5
125	25	99.5
100	30	99.0
125	37	99.0
100	46	98.0
125	57	98.0

Description	Part No.
N2-45 High Flow Nitrogen Generator without Air Compressor	**N9306212**

Product Specification	
Purity:	95.0 – 99.5%
Hydrocarbon-free	
Phthalate-free	
Atmospheric Dewpoint	-58 °F (-50 °C)
Particles >0.01 µm:	None
Suspended liquids:	None
Min./Max. operating pressure:	60/145 psig (4.0/10 barg)
Recommended ambient operating temp range	72 °F (22 °C)
Inlet air temperature range:	60 °F – 95 °F (15 °C – 35 °C)
Maximum recommended inlet air temperature	110 °F (43 °C)
Inlet/Outlet ports	1/2" NPT
Electrical requirements:	None (filtration system only)
Dimensions (net):	61 cm W x 50 cm D x140 cm H
Weight (shipping)	114 kg, 250 lbs

*See www.perkinelmer.com for complete listing of flow rates.

Flow Rates*		
Inlet psi	Output lpm	Purity %
100	39	99.5
125	55	99.5
100	53	99.0
125	74	99.0
100	73	98.0
125	106	98.0

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